

A Science Magazine from CTW, the Creators of Sesame Street.

July/August 1984

321 CONTACT

Underwater
Adventure!



Ron Guidry Pitches In!

New York Yankees pitcher, Ron Guidry, doesn't only play in the big leagues. Ron enjoys helping out kids in the Special Olympics. That's a sports event for people who are mentally handicapped. Guidry first got interested because his brother, Travis, is a Special Olympic athlete.

Ron Guidry plays baseball with the kids, shows them how to hit and how to throw. "I never think about the word handicapped. I'm able to do some things they can't do. But they're good at plenty of things I'm not good at. I think we're all special," Ron told 3-2-1 CONTACT.

For more about the Special Olympics and two other terrific Olympics, turn to page 14.

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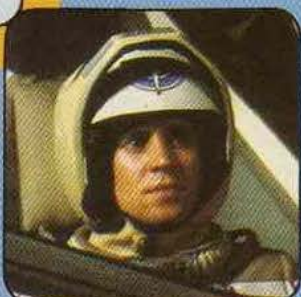
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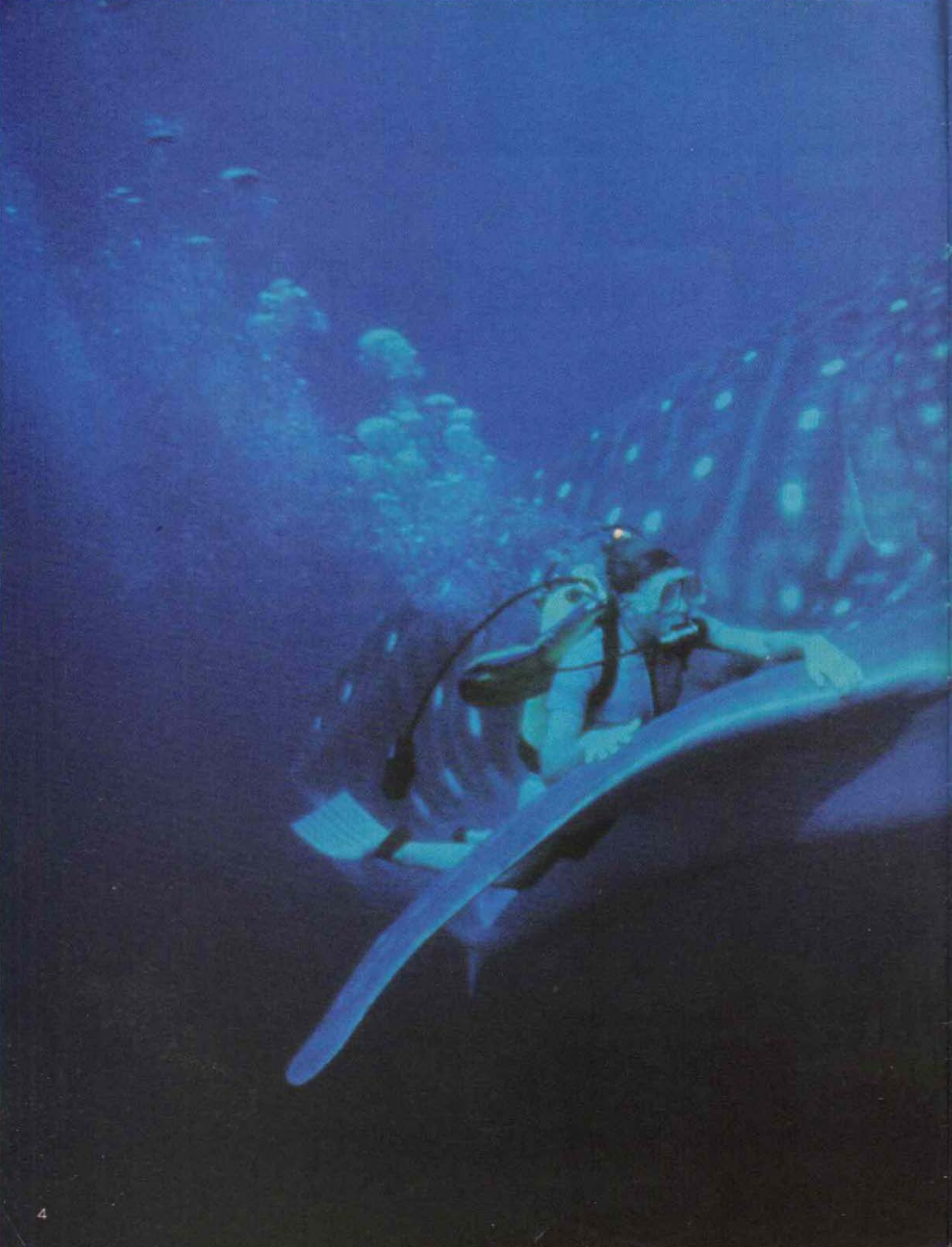
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Underwater Explorers

by
Joanna
Foley

PHOTOGRAPHERS BRAVE THE DANGERS OF THE DEEP

When sea creatures snap at Anne and David Doubilet, the Doubilets snap back—with their cameras, that is.

The Doubilets (*photo, right*) are underwater photographers and explorers. They dive beneath the surface of the seas to take pictures of the strange plants and animals that live there. David and Anne can't count on the creatures they're photographing to stop at the right distance or to grin at the right moment. But when their ➡





When Anne went to Australia, she checked out this underground cave filled with fresh, clear water.

work goes well, they bring back beautiful photos of rarely seen sea creatures.

The Doubilets are more than just photographers who travel the world and work in risky places, however. They're an important part of a science team. The Doubilets often dive with scientists who are experts on marine life. Their photos give these scientists a permanent record of how sea animals look and act in their natural surroundings.

Adventure in the Deep

"We felt like real underwater explorers in the Galapagos Islands of the Pacific because we were the first people to dive in those waters," Anne told 3-2-1 CONTACT. "So perhaps we were one of the first humans that a lot of the big sea animals ever saw. That was really exciting!"

Meeting new people and working with them is also exciting. But the best part of their work for the Doubilets is the lovely colors and strange shapes they see—and photograph—underwater. "There are sharks with really big green eyes, the size of Ping-Pong balls," says Anne. "They're just dazzling. You can't believe how beautiful

they are. And there are lovely fish that glow in the darkness of the ocean and lovely branching reefs of red and pink coral."

As the Doubilets explore the world's underwater life, they learn a lot from scientists. They dive with Dr. Eugenie Clark, a researcher who specializes in studying sea creatures. From her, the Doubilets discovered that it's important to be curious about whatever you're seeing.

"Eugenie is probably the best person in the whole world to dive with," says David. "By observing the little things an animal is doing, she helps unravel a bit of the mystery of the sea."

For example, Dr. Clark caught a small fish called the Moses sole in the Red Sea. How could such a small fish protect itself, she wondered. From studying it, she discovered that it put out a powerful poison when attacked.

To find out how powerful the poison was, David and Eugenie set up an experiment with a shark and a sole. David snapped pictures as the experiment took place. "A shark would go to attack the fish and actually get paralyzed," says David in amazement. "The camera caught the shark in the act of stopping, closing its eyes, and

turning away," he says happily. "We helped document something for science, and we also got a nice picture."

Dr. Clark agrees that David and Anne's work is important to scientists. "My studies have been greatly helped by the marvelous photos they take," she says. "I can study the photos later and see exactly what the sharks are doing."

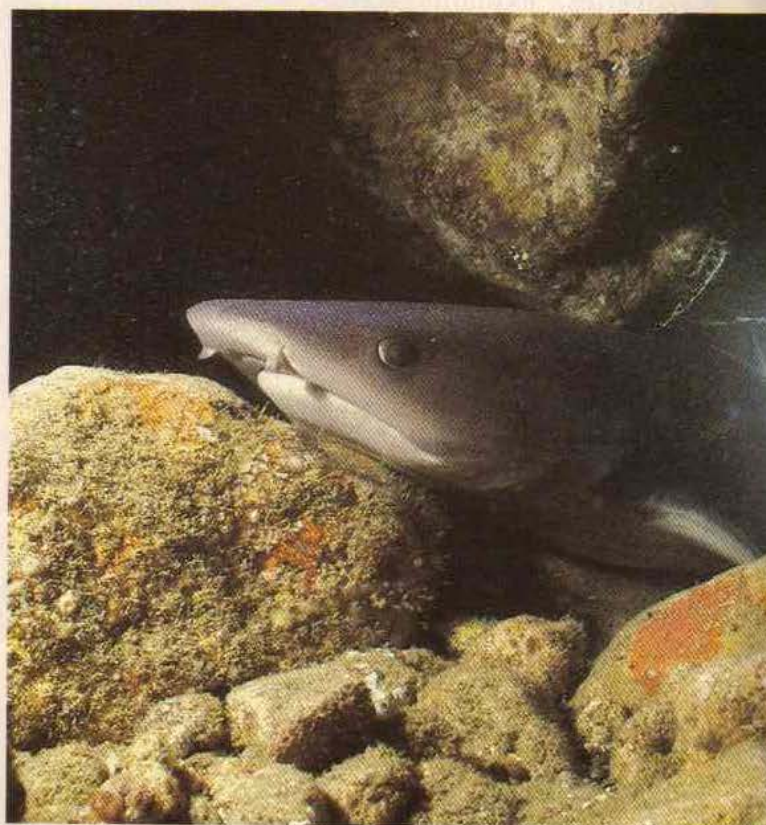
More Than Just a Pretty Fish

In fact, taking a picture that really shows how an animal acts is more important to the Doubilets than taking a photo that's merely pretty.

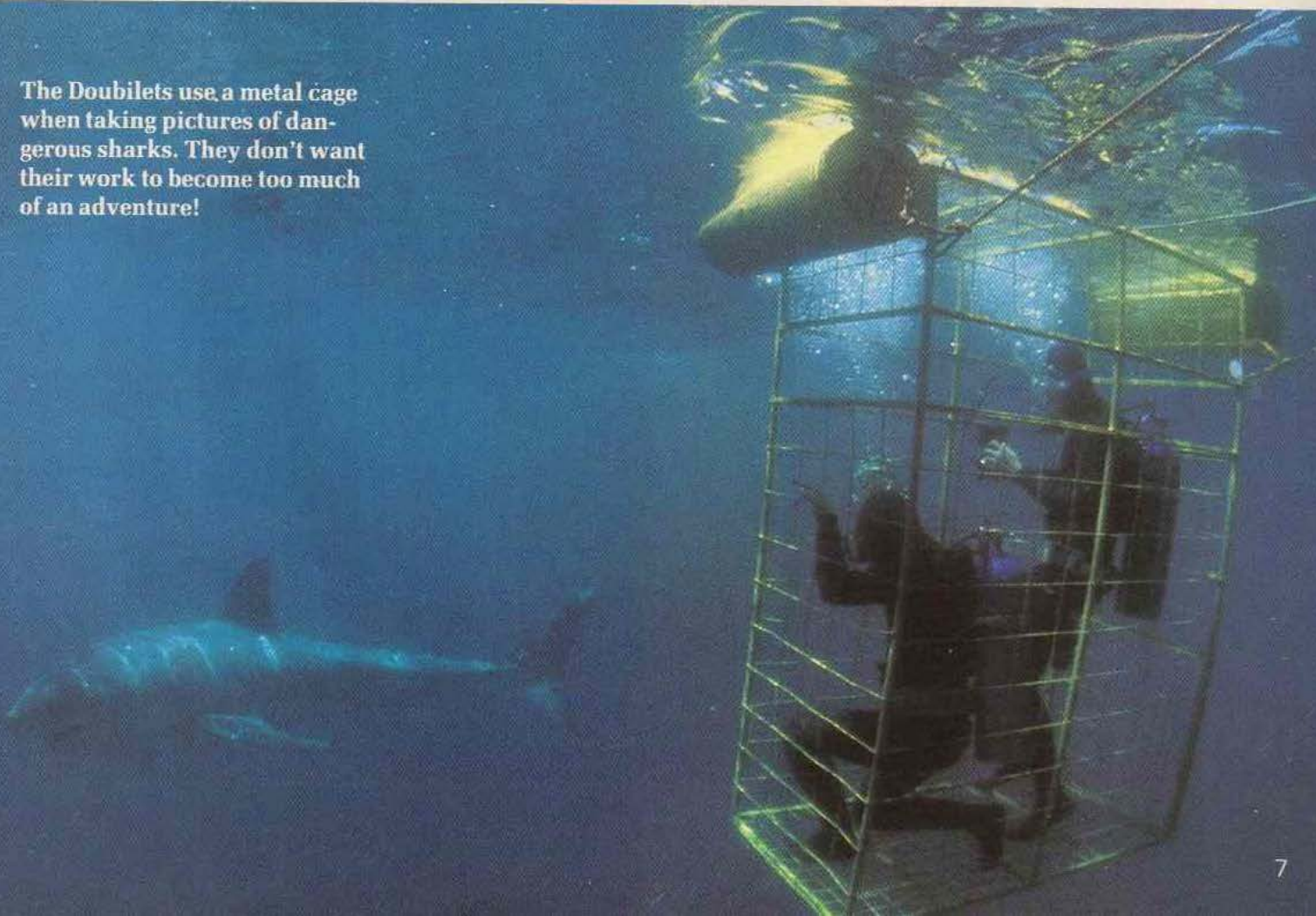
"Some people put peanut butter on a sponge and take pictures of the fish nibbling the sponge," David says. "That's sort of cheating. It's much better to show the fish doing whatever it actually does—without human help."

David and Anne believe that their closeup photos work best. "You can make all sorts of ➡

Right: To get pictures of whitetip sharks, David and Anne had to explore several underwater caves near the coast of Japan.



The Doubilets use a metal cage when taking pictures of dangerous sharks. They don't want their work to become too much of an adventure!



discoveries," explains David. "You can show how a shrimp's antennae touch the side of the fish that the shrimp lives with so the two creatures can communicate."

To see how an animal really lives can turn into quite an adventure. Once the Doubilets had a chance to learn about how the sand tiger sharks live in an underwater Japanese cave. "Nobody knows how they really behave unless you actually go into the cave with them," David says. So that's just where the photographers went, loaded with diving gear, cameras, and lights.

Strong currents were flowing outside the cave. So, once inside, neither the sharks nor the people wanted to leave. "Their long skinny teeth make them look very ferocious," recalls Anne.

"We waltzed with the sharks for a while," said David. "They would move toward us, and we'd make a move backward."

Then the photographers would swim toward the sharks, and the sharks would move backward. The Doubilets kept taking pictures for a long time. And the seemingly ferocious sharks

never came closer. From experiments like this, they have learned that you can't judge how dangerous a sea creature is by its looks.

Man and Woman Overboard

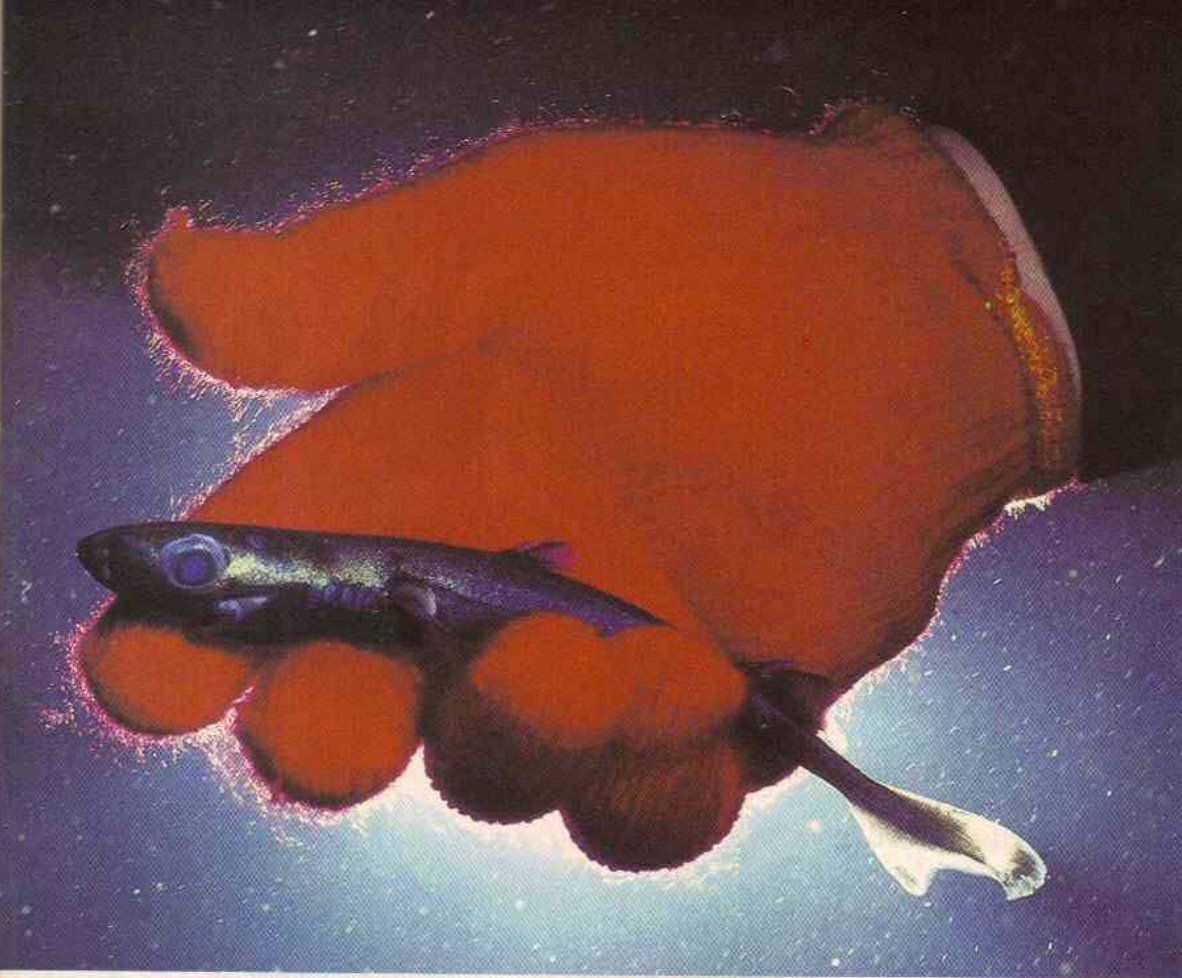
Having the right equipment is an important part of David and Anne's work. When they're on the trail of the great white shark, for example, their equipment includes a metal cage to protect them when they dive. What if a hungry shark moves in too close? "It's the shark's teeth against the cage's metal, and the metal always wins!" grins David.

For taking pictures of less dangerous animals, David and Anne don't use a diving cage. However they still take along lots of equipment every time they go over the side of their boat.

Snapping pictures of sea creatures in the ocean is about 10 times as hard as taking pictures of wild animals on land. The main problem is that you just can't spend that much time underwater. Of course, the Doubilets take compressed air with them. But on deep dives, they

To photograph tiny animals living in the sea, David must use strong lights and a telephoto lens for closeup shots.





Left: David and Anne meet many fascinating sea creatures including this tiny cigar shark which they can hold in their hands.

Below: This is a megamouth shark. The newly-discovered species is 15 feet long and has a mouth that's four feet wide. Only one of the species has been found so far.

run out of air very quickly.

So to make the best use of their time underwater, David and Anne don't waste minutes coming up to change a roll of film. Instead, they take 10 or 12 cameras down when they dive. The cameras are specially equipped to work underwater. Each camera also comes with at least two flashes which are designed for the sea.

Because they keep learning new things, David and Anne find undersea exploring very exciting. Of course, some people might not like a job where they have to get wet every time they go to work and where they meet a lot of sharks. But to the Doubilets, the beauty and excitement of the underwater world make-up for all the risks. In fact, they could hardly wait for their next adventure.

But before they took off, they offered advice to CONTACT readers: "Never lose your curiosity," says David. "Always ask yourself, 'Why?' and bother adults with your questions. That's a kid's job description: Bother adults."

Anne urges kids to spend lots of time on whatever they're interested in. "Don't give up," she says. "If something doesn't work, try again." With that, the Doubilets gathered their equipment and headed to faraway seas.



Any Questions?

by Mary Tora

Do snakes sting with their tongues?

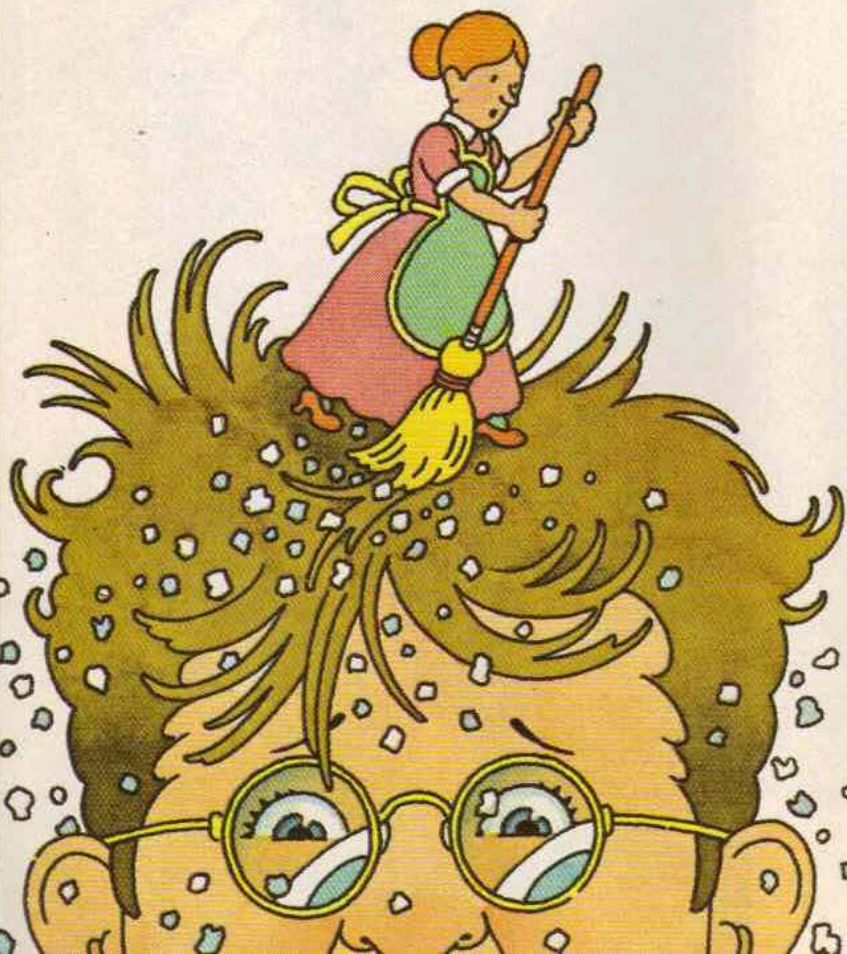
A snake's tongue may look scary as it flicks in and out of the snake's mouth. It's long, thin, and forked, but it's not for stinging.

The tongue helps the snake to smell. The flicking tongue picks up particles from the ground and the air. The snake uses the tongue to put the particles into two tiny holes in the roof of its mouth. These holes are part of the snake's smelling system.

A snake's tongue is also its sense of touch. That's why it flicks its tongue out as it slithers along the ground. The snake is actually feeling what is around it.

So now you know a snake can't hurt you with its tongue. But be careful of its teeth! Many snakes have sharp, hollow fangs which inject poison when they bite. There's one good piece of news, though. Ninety per cent of the known snakes are not poisonous.

Question sent in by Tina Randall, Pittsburgh, PA.



Why do people get dandruff?

Did you know there's a monthly housecleaning on your scalp? Dead skin is always falling off in tiny flakes. Some of these flakes are bigger and come off more often. That's dandruff.

No one knows for sure what makes your scalp flake. Some scalp flaking may be caused by a number of skin conditions. The most common makes your scalp itchy and red—and then the flakes start to fall.

If you think you can catch dandruff from other people, relax. It's not catching. Doctors say your tendency to get dandruff is often passed on in your genes. So if you have dandruff, there's a good chance your parents have it, too.

If you do have dandruff you may be able to keep it under control by using a special shampoo. But if your scalp is really making you flakey, visit your doctor.

Question sent in by Susan Kiley, Suffern, NY.

Do you have a question that no one seems able to answer? Why not ask us? Send your question, along with your name, address, and age, to:

Any Questions?
3-2-1 CONTACT
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Ridgefield, NJ 07657

How are lead pencils made?

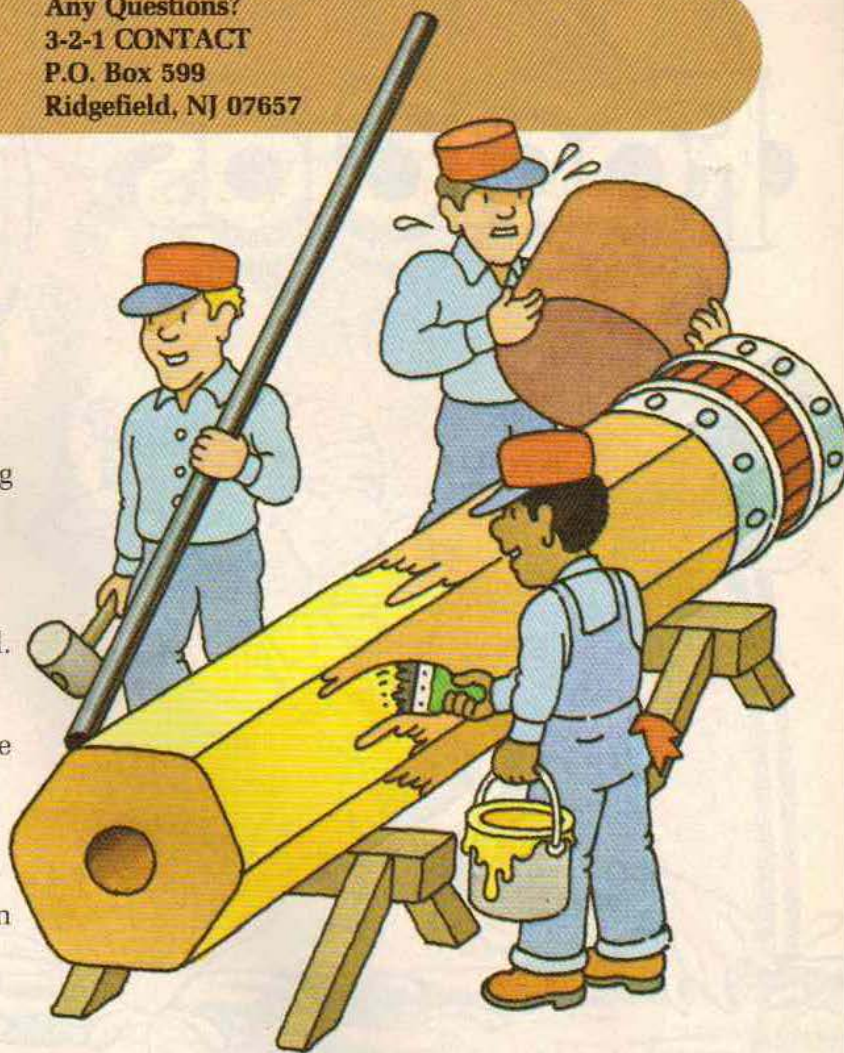
One thing is for sure. An ingredient that's never used is lead! The black stuff you write with in a pencil is a mixture of clay, water, and a mineral called graphite.

In a factory, a machine squeezes this mixture through a small hole. Then it comes out in a long black strand. The strand gets cut into pencil-sized pieces, then goes into an oven to harden. Next, a wax coating is added to help it write smoothly.

The outside of a pencil is made of cedar wood. Pieces of this wood are cut into blocks. Each block has nine grooves. A strip of graphite mixture is put into each one. Then another piece of wood is fitted on top. The strips of graphite are then sealed into the wood's center. And the wood gets cut into nine pencil shapes.

To finish up, the outside of the pencil is smoothed and painted. An eraser is added. Then the pencils are sold to you—to do games and crossword puzzles!

Question sent in by Leigh Medaros, East Greenwich, RI.



Why isn't there air on the moon?

The answer to this question is a real gas. The moon has no air, or atmosphere, because it doesn't have gravity strong enough to hold it.

Gravity is the force that pulls everything toward the center of a planet. Because of it, objects fall down instead of floating away. And you stay firmly planted on the ground instead of floating off into space.

Gravity holds the gases that make up the earth's atmosphere in place, too. It pulls on them so they form a layer around the planet.

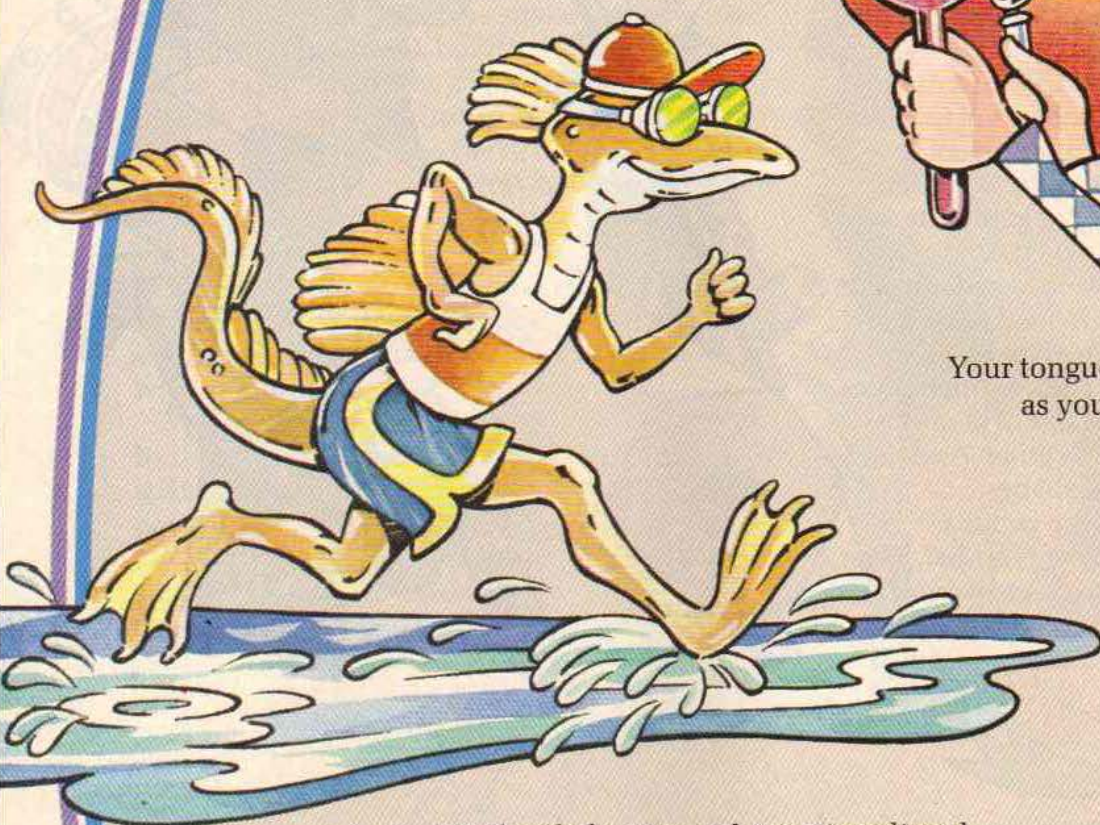
On the moon, gravity is just not strong enough to do this job. Moon gravity is only about one sixth as strong as gravity on earth. That's not a lot of pull to hold onto air. Some astronomers think the moon may have once had an atmosphere. But the moon's weak gravity would have allowed the gases to slowly escape into space.

Question sent in by Michele Shipp, Omaha, NE.

Factoids



Your tongue print is as unique
as your fingerprint.

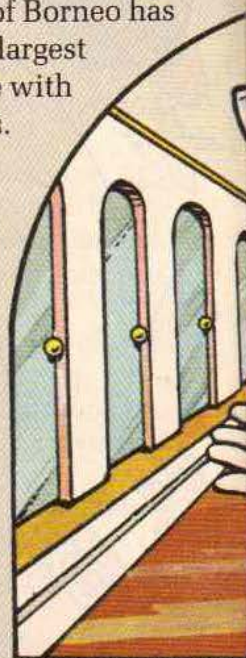


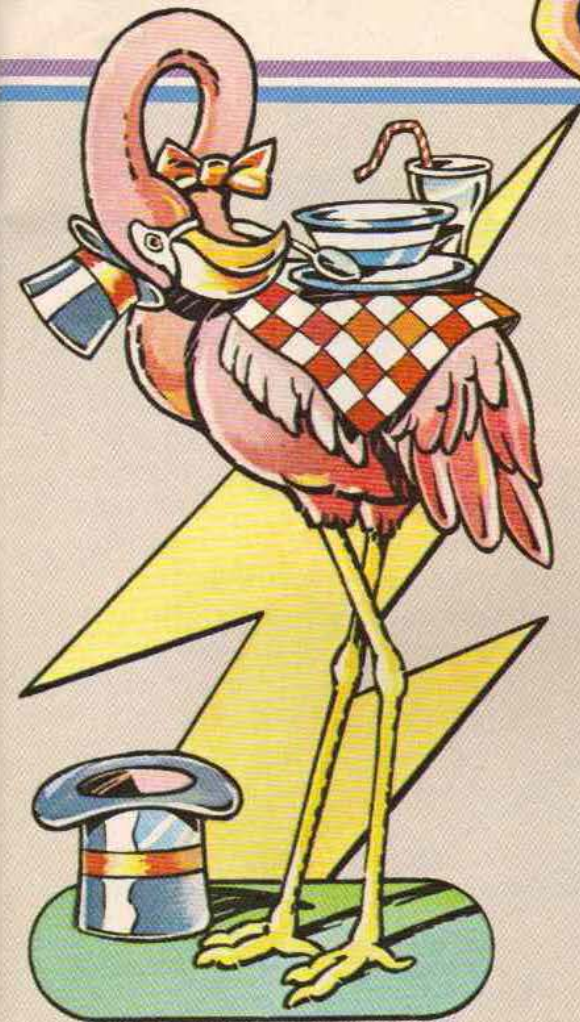
The basilisk, a Central American lizard,
can run across water without sinking.

The island of Borneo has
the world's largest
royal palace with
1,788 rooms.

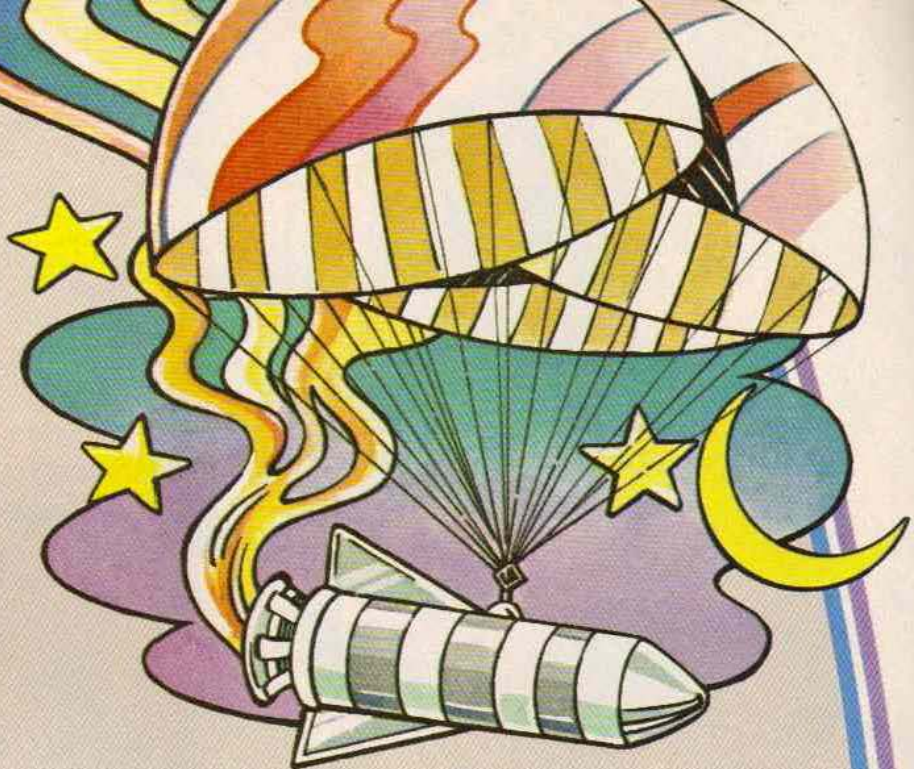


A newborn baby
spends an average
of 133 minutes
a day crying.





A flamingo can
eat only with its head
upside down.

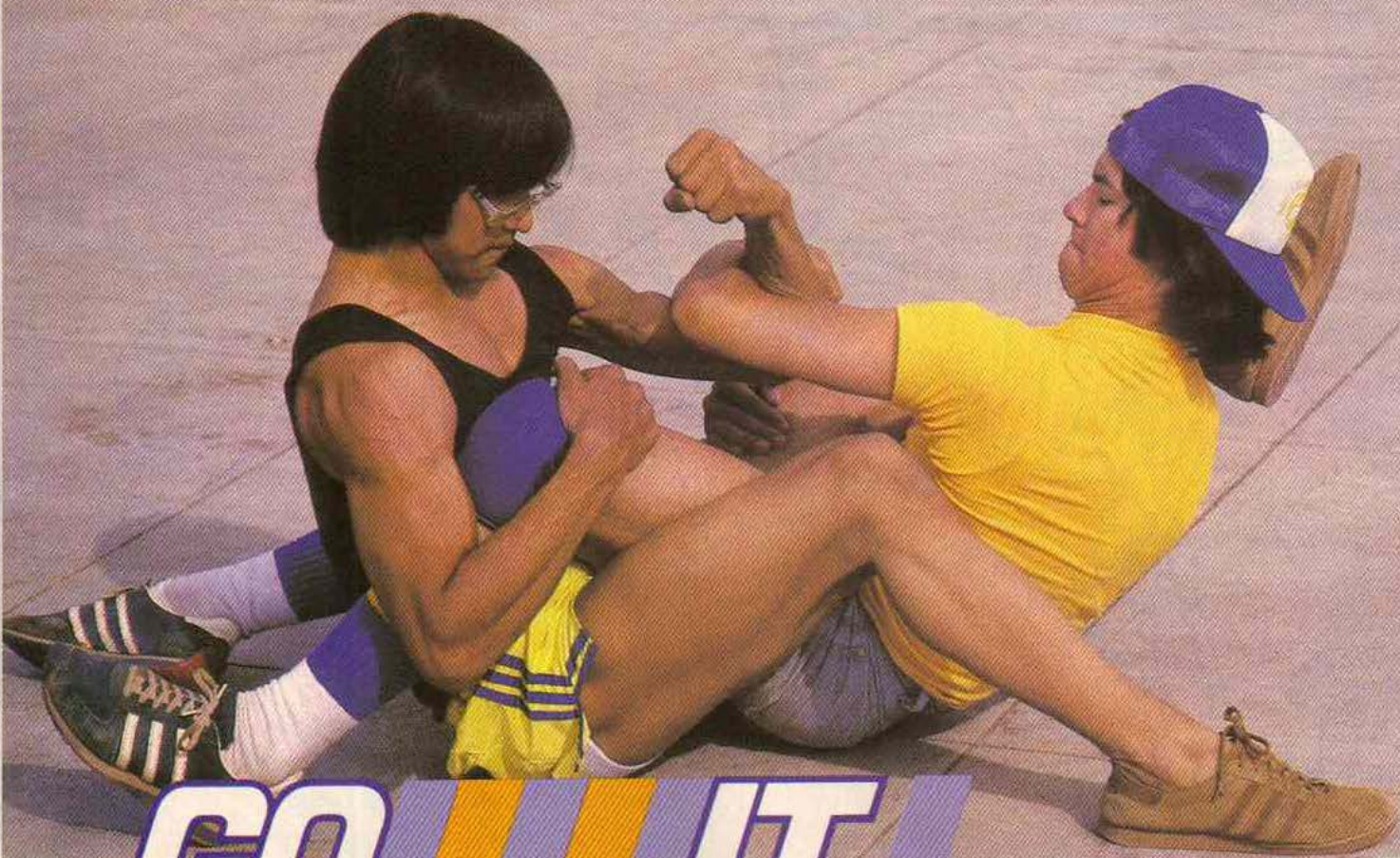


The rockets that launch the space
shuttle need more than six
tons of parachute cloth to bring
them down safely.



There's enough iron
in the body of a healthy
adult to make a nail
three inches long.





GO FOR IT!

by Nora Zamichow

Athletes Compete In Some Unusual Olympics

Have you ever heard of a grandfather who surfboards? Or a young girl who races laps in a wheelchair? How about a person who sets a record for eating whale blubber in the fastest time?

It may sound amazing, but these people are all Olympic athletes. But they're not taking part in the Olympics in Los Angeles, California. Instead, the athletes are competing in special kinds of Olympics that are taking place all around the United States.

The surfer grandfather, for example, takes part in the Senior Olympics in California. The wheelchair racer and other handicapped people have lots of fun in the Special Olympics. And the person who eats whale blubber the fastest is a winner at the Eskimo Olympics in Alaska.

What goes on in these unusual Olympics? Take a front and center seat now, and you will find out!

Eskimo Olympics

If being tossed 28 feet up in the air from a blanket sounds exciting, then the Eskimo Olympics are just for you.

During the *nalukatuk* or blanket toss, one person stands in the center of a 12-foot-wide blanket. The people holding the sealskin blanket all pull at the same time. That tosses the person in the center as high as a three-story building.

The blanket toss game has been played for centuries by Eskimos. But before it became a game, it had a very practical use. Long ago, the native American Eskimos placed someone on a blanket and tossed her in the air to look for whales at sea.

Since the game has no practical use anymore, some Eskimos began forgetting how to play it. But others decided that the blanket toss and the rest of the old games were worth saving. Besides being fun to play, the games had taught the

Eskimos skills that helped them to survive in a tough world.

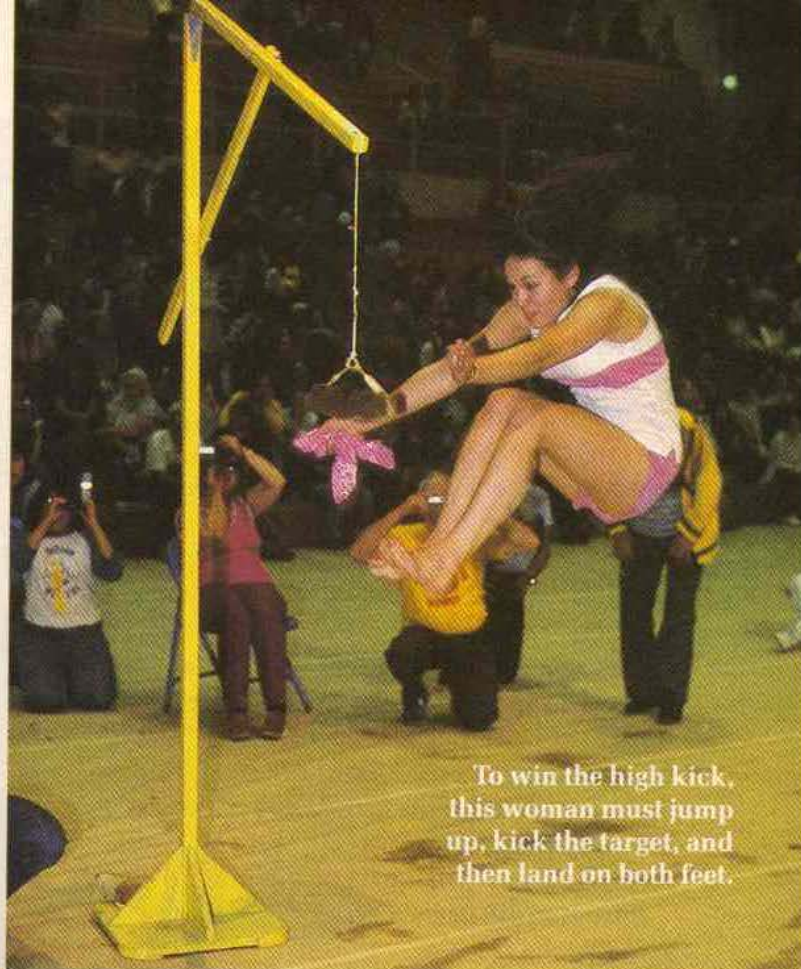
So 23 years ago, the Olympics for Eskimos began. Reggie Joule, an Eskimo Olympic official told 3-2-1 CONTACT, "We are playing the games of our ancestors and preserving these games by teaching the young to play."

For games like the muktuk eating contest, there is just no way to train. In this contest, first place goes to the fastest eater of a piece of whale skin and blubber. Whale meat is tough to chew, and the players need strong teeth. But usually this game is over within 20 seconds.

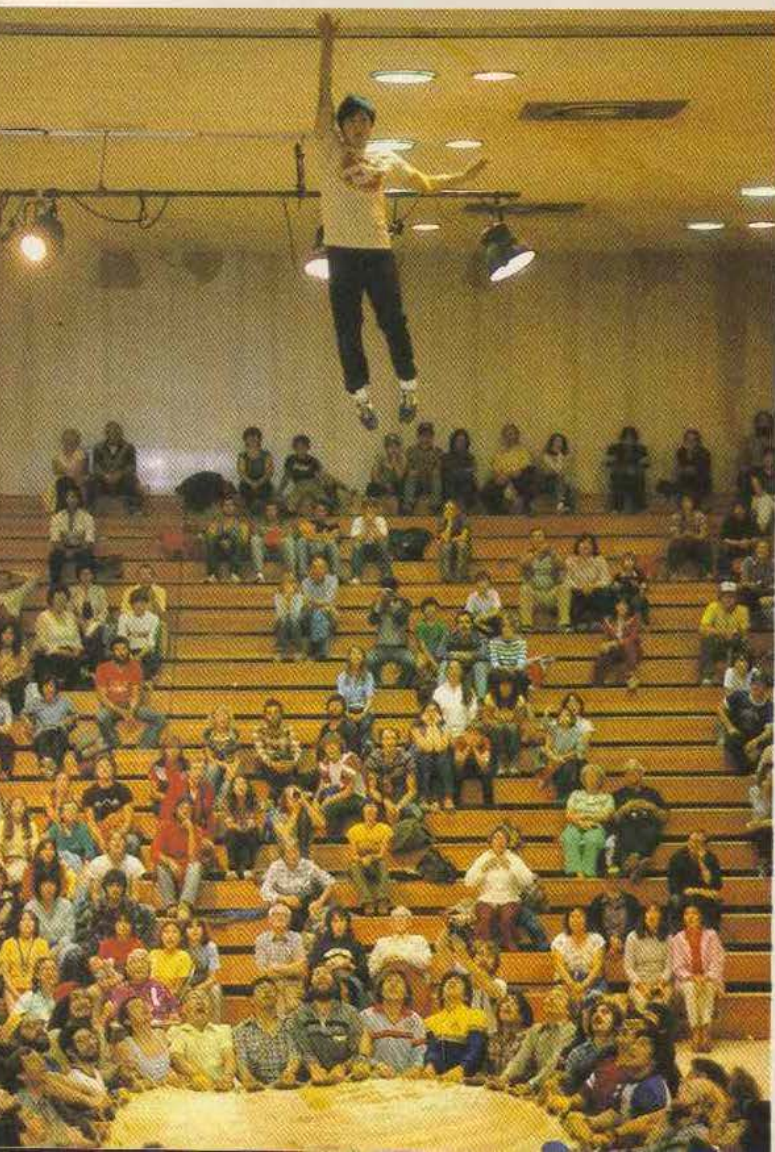
Most games are more athletic than the muktuk, however. For Eskimo athletes with strong legs, a favorite game is the high kick. Here, a player kicks at a small ball hanging from a high pole. The player must kick the ball, which is six feet in the air, then land on both feet.

Like the blanket toss, high kicking also has its

Left: At the Eskimo Olympics in Alaska, athletes play unusual games such as the arm pull.



To win the high kick, this woman must jump up, kick the target, and then land on both feet.



Left: The blanket toss can lift Eskimo athletes 30 feet into the air.

roots in history. Long ago, whale hunters at sea had messengers run across the ice towards the villages. The messengers sent signals that could be seen by villagers from a distance. If a whale had been caught, the messenger did a high kick.

"Eskimos were tough enough to survive in a harsh world," says Reggie Joule. "Our games show this by testing both body and mind."

Special Olympics

Raymond Snyder, 17, goes through a series of push-ups, somersaults, handstands, and headstands. As he finishes, the crowd cheers wildly. Raymond is just like any other gymnast—except for one big difference. Raymond is a young man who is mentally retarded. He must always use a wheelchair, except when he does gymnastics.

Raymond is one of a million children and adults in the U.S. with mental disabilities who take part in the Special Olympics. Though Raymond has a disability, he still enjoys sports and exercise. But it is difficult for children with handicaps to compete in regular sports events.

"The Special Olympics give them the chance to try what they ordinarily wouldn't do," ➡

says Mark De Rose, a Special Olympics official.

Athletes in the Special Olympics participate in swimming, track and field events, and team sports such as volleyball and soccer. There are races for people who must get around in wheelchairs. Wheelchairs with motors are not allowed. Racers really have to get their arms moving to make their chairs zoom along.

"It's not a matter of winning a race, but taking part in a group sports event," says Jane Holland, teacher of special children. The Special Olympics gives them the opportunity to go on sleep-aways, be part of a team, and a chance to be a winner. "At the Special Olympics everyone is a winner," she adds.

Just as athletes in the regular Olympics train all year long, the kids in Special Olympics also train and work hard. The games are just the end of a program of year-round training. The greatest thrill for the athletes is to see themselves get better in their performance. As their skills improve, new and more difficult challenges are added.

Tare Bendix of Larchmont, New York, was

Below: Running in the Special Olympics is one of many sports that kids with handicaps can enjoy.

eight years old when she started training for the Special Olympics. She participated in ice skating, swimming, and other team sports. In junior high, Tare was in the Special Olympics. By 14, Tare, who is mentally handicapped, played on her school volleyball team. That was one of the best experiences of her life!

Senior Olympics

Ruth Rothfarb, 81, didn't get into sports until she was 60. When 78-year-old Sing Lum turned 65, he began running. Four years ago, Marilla Salisbury, 74, started jogging.

These athletes know it's never too late for good health. They are all record holders in the Senior Olympics. In these games, most people are over 50 years old.

What makes a person begin running after the first 70 years of her life? Marilla says many of her friends were finding it hard to move around.

"I figured if I stayed flexible and fit, it wouldn't happen to me." So Marilla began a regular program of exercise. Today she has set seven world records and has won over 15 medals in her age group.

Not everyone who competes in the Senior





Left: Racing in wheelchairs gives kids a lot of exercise because they really have to push hard.

Olympics is new to sports. Some, like Don Neefe, 72, have been active for years. As Don says, "I can't swim as fast as I once could, but I can swim as far."

The Senior Olympic games are adjusted for the players. Sometimes this means using smaller or lighter equipment. Older people have a harder time moving around a Ping-Pong table. So the game is played on a table that is smaller than the full size. The surfing events use a smaller surfboard called a Boogie Board.

"Staying fit is the object in the Senior Olympics events," says Warren Blaney. He started the Senior Olympics 15 years ago. Many doctors agree with him that older people ought to stay active. Bonnie Gorsica, a sports medicine expert says, "Exercising improves your circulation and keeps your body weight down. This slows the aging process."

If you want proof that staying active is good for older people, go watch the Senior Olympics sometime. Most of the athletes look terrific. They could give you a run for your money!

Below: In the Senior Olympics, staying fit is as important as winning medals.



GOING FOR LA

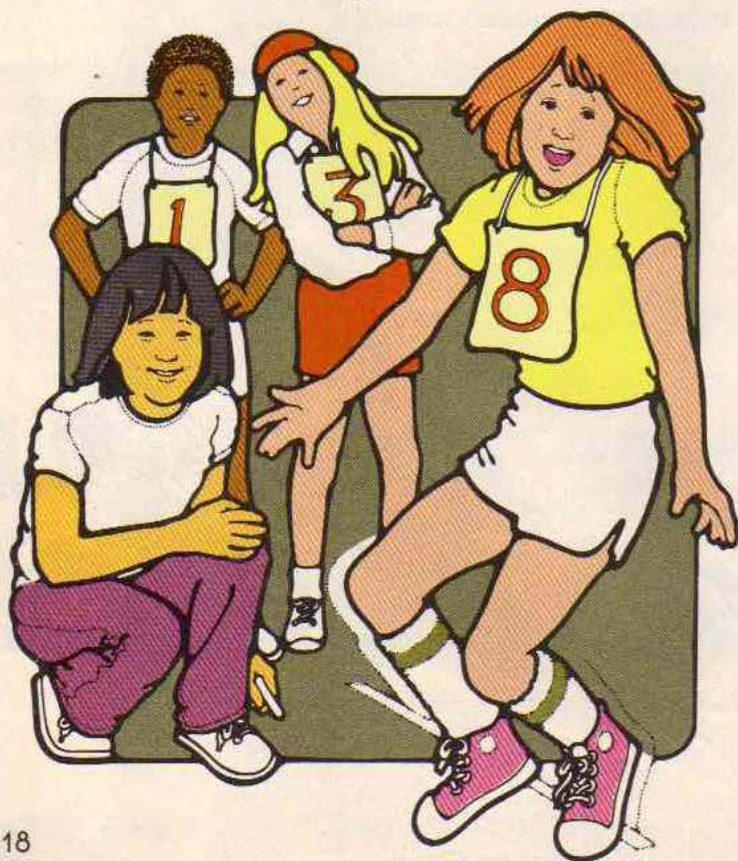
Now that you've read about three unusual kinds of Olympics, you may be in a game-playing mood yourself. If so, have we got a treat for you. We guarantee that no Olympics anywhere have ever had these events. But don't let that stop you! All you need to get going are some friends, a few simple objects, and a sense of humor. If you want, keep score as you go along and find your own Olympic winner. Or forget the scores—and just have fun!

A Real Short Jump

You Need: Chalk or a stick for marking distances.

Draw a starting line. Then draw a second line about 20 feet away. Run from the first to the second line as fast as you can. Then take a flying leap. But before you spring into action, there's one thing you should know. The idea isn't to jump the *longest* distance. It's to jump the *shortest*.

Remember, for a good start, you've got to run all out before you jump. One of the other players will mark your landing spot with chalk or scratch it in the dirt with a stick. Happy landings!



Balloon Relay Race

You Need: Blown-up balloons, at least six people.

Divide up into two equal teams. The object of this race is for everyone on your team to carry an inflated balloon from start to the finish line and back. No problem, right? Wrong! You have to carry the balloon *between* your knees. Hop from start to the finish line. (Mark the finish line about 20 feet from start.) Then turn around and walk back as fast as you can, with the balloon still between your knees. If the balloon drops onto the ground or breaks, you have to go back and start over.

When you get back to start, let the balloon fall to the ground. The next person must kneel, get the balloon between his or her knees and get back up without dropping the balloon. No hands allowed. Then that person races, and so on, until everyone on the team is done. The first team to finish wins.

UGHS A Silly Olympics

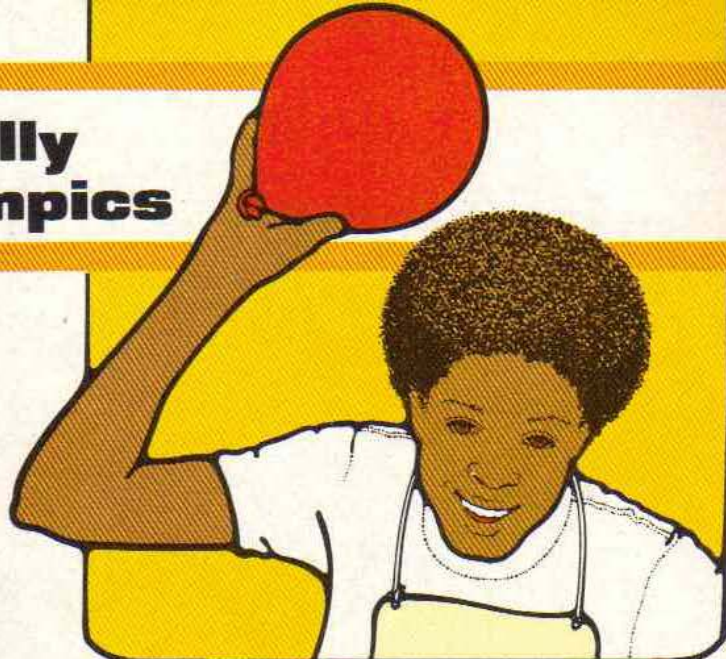
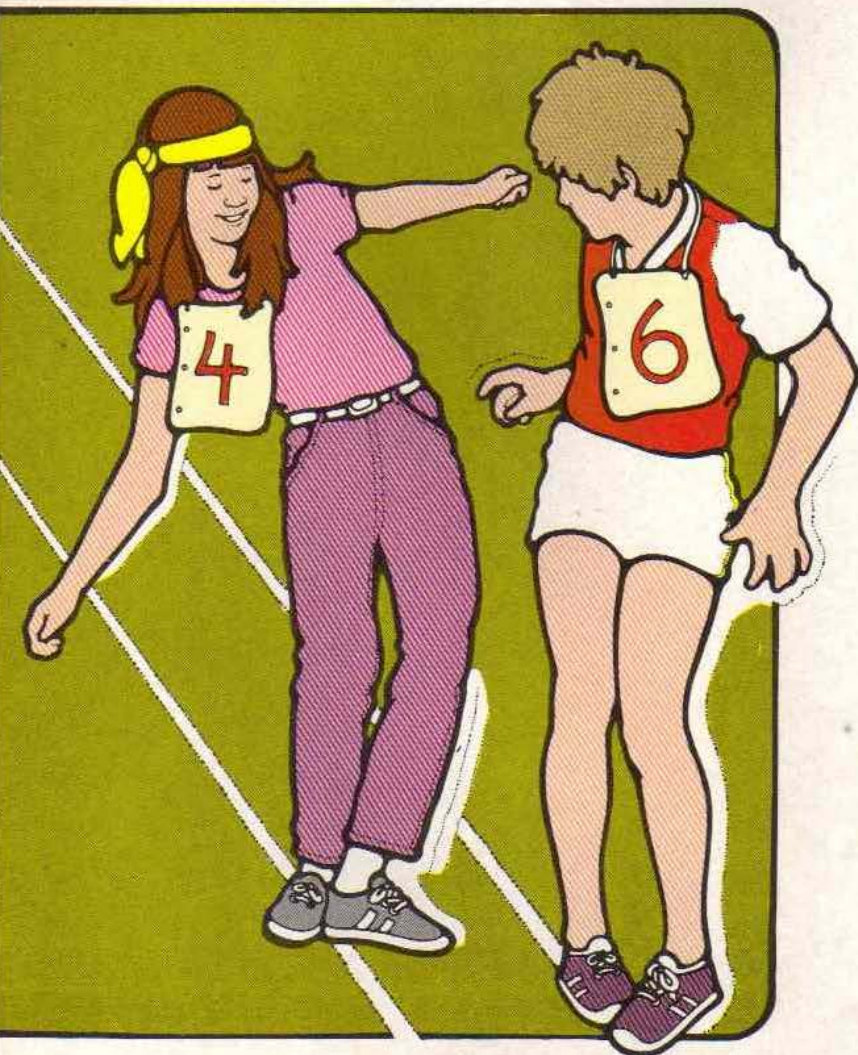
Reverse Race

You Need: Chalk or a stick for marking lines.

Alice in Wonderland would have loved this topsy-turvy race. You start at the finish line and finish at start. Not only that, you race backwards.

To start, draw a finish line and a start line about 30 feet apart. Then draw two straight connecting lines between them. You'll race on these so make sure they're far enough apart (see diagram).

Each team lines up in back of the finish line—backwards. When the race starts, the first person in each line races backwards down his team's line to start. Both feet must touch some part of the line at all times. When the first person gets to start, the next person goes—and so on until everyone races. The first team to get all its people to the finish—er—start line, wins.



Balloonacy Throw

You Need: Blown-up balloons, chalk or a stick for marking distances.

How's your throwing arm? For this game, it doesn't matter whether it's fabulous or feeble. The object of this challenge is to throw an inflated balloon as far as you can. Sounds easy, right? That's what we thought until we tried it.

First, draw a start line. Then take turns standing behind it to throw the balloon with all of your might. Have someone mark where your balloon lands with chalk or a stick.

The Eyes Have It

You Need: A cup of water for everyone who plays.

Line up in two rows so that everyone is facing a partner—about three feet apart. Everyone should get a cup of water to start. Each person fills his or her mouth with as much water as possible. Then players hold the water in their mouths and stare at the partner across from them. You can make goofy faces or sounds. The first person to laugh, spit water out, or swallow loses. Partners compete against one another. The person in each group that holds out the longest wins. The other person gets second place.





A LADY IN DISTRESS

KIDS HELP THE STATUE OF LIBERTY

by Jonathan Rosenbloom

The Statue of Liberty is in big trouble. And young people all across the United States are coming to its rescue.

The statue was a gift of friendship from the people of France to the people of the United States. It was paid for mostly by gifts from French children.

For 98 years, the statue has been standing on a small island in the harbor of New York City. Immigrants to America gazed at its shining torch as they sailed past. This was one of their first views of the U.S. To many, the statue was a symbol of freedom, of hope, and of new beginnings.

But in recent years, the Statue of Liberty has fallen on hard times. Harsh weather has helped to erode the statue. Salt air, acid rain, and other types of pollution have also taken their toll on this national symbol.

The statue's body is becoming dangerously weak. Bits of the crown have fallen into New York harbor. Her torch is no ➡

longer safe to visit. It has become evident that the Statue of Liberty needs help—fast.

“I don’t know how much time we have before the damage is unable to be repaired,” notes David Moffitt. He is a National Park Service official who works at the Statue of Liberty. Mr. Moffitt explains that much of the eroding has taken place in the last 20 years.

Mr. Moffitt blames much of the erosion on acid rain. Scientists think acid rain is caused by sulfur oxide. The chemical comes out of the chimneys of some factories.

Once the chemical mixes with water in the air, it forms acids which fall to earth as rain. This acid rain eats away at stone and metal. And, according to Mr. Moffitt, that’s just what it is doing to the Statue of Liberty.

But now help—and repairs—are on the way. People are getting together to stop the erosion and to make the statue shipshape again. Ross Holland is the person in charge of repairing and restoring the statue.

“Fixing up the statue is going to be a huge job,” Mr. Holland told 3-2-1 CONTACT. “The copper skin, which is only as thick as a half-dollar, has held up well over the years,” he explains. “But the skin needs to be cleaned, and the rust and acid spots (*photo, right*) must be removed.”

Fixing the Skeleton

“The big work, though, will take place on the inside, or skeleton, of the statue,” notes Mr. Holland. The skeleton is made up of ribs which support the copper skin, much the same way that your skeleton gives shape to your body.

Unfortunately, each of the 1,600 wrought iron ribs is rusting and crumbling. This often happens when different metals come into contact. So the statue’s body is becoming weak.

To make the body stronger, engineers will replace each of the wrought iron ribs with ones of a stronger metal. Engineers hope these will hold up better over the years. “This is going to take a very long time since each rib is a different size and shape. And only a few of the 10- to 12-foot ribs can be removed at a time or else the statue would cave in,” Mr. Holland explains.

Besides a “rib transplant,” the statue’s torch will be completely rebuilt. The old one, which leaks and is rusted, will be placed in a museum in the statue. “The new one will look nearly the same. You’ll never be able to tell the difference,” laughs Mr. Holland.

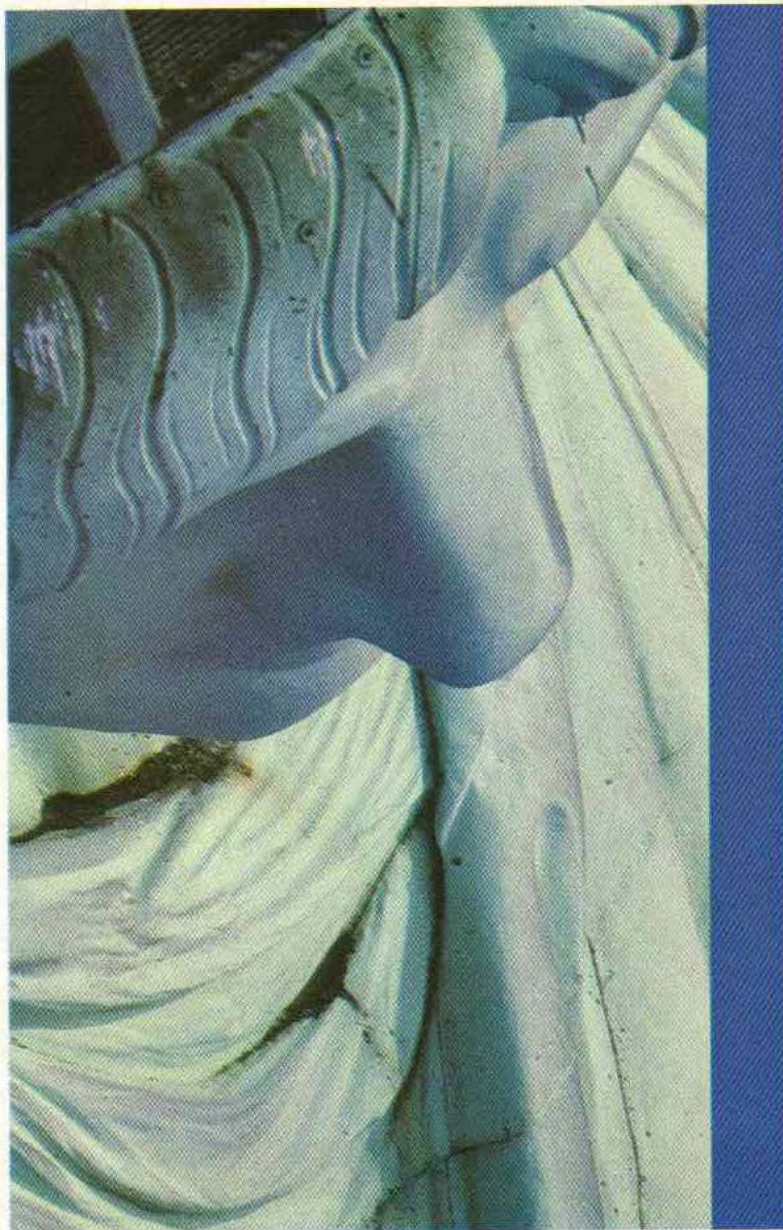
Kids to the Rescue

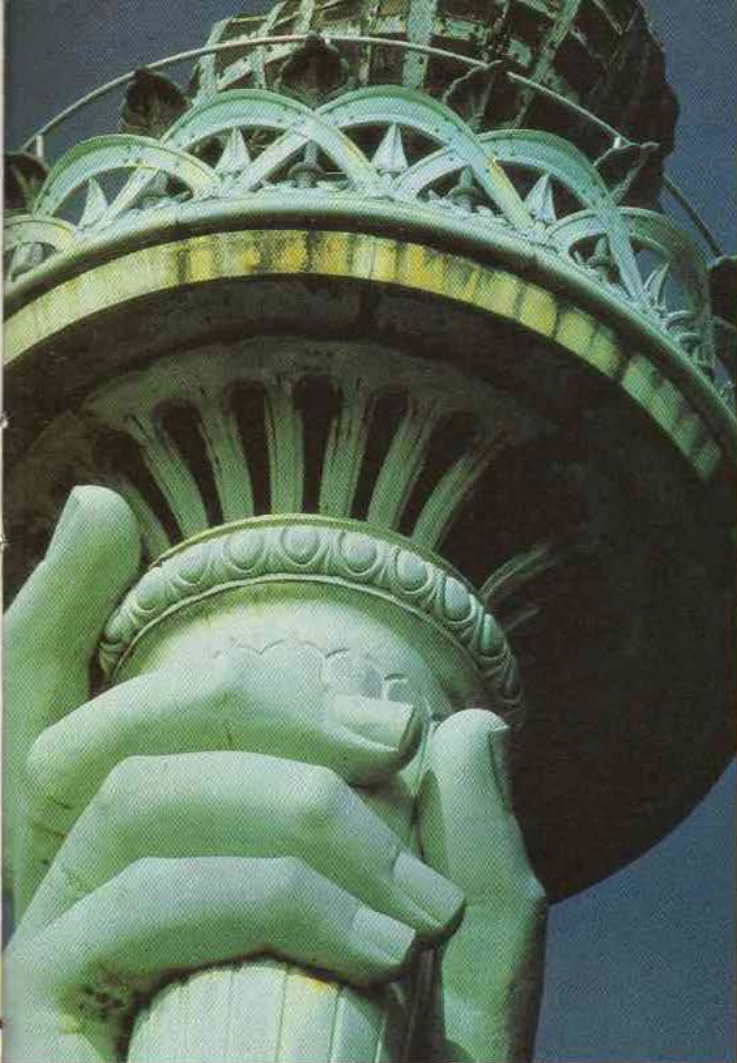
All of these repairs are going to cost big bucks. Some \$30 million to be exact. And some of that money is being raised by kids.

In Washington, Kansas, for instance, kids held an S.O.S. (Save Our Statue) Balloon launch. The young people sent up 60 balloons. Attached to each was a message asking the finder to donate money to the project.

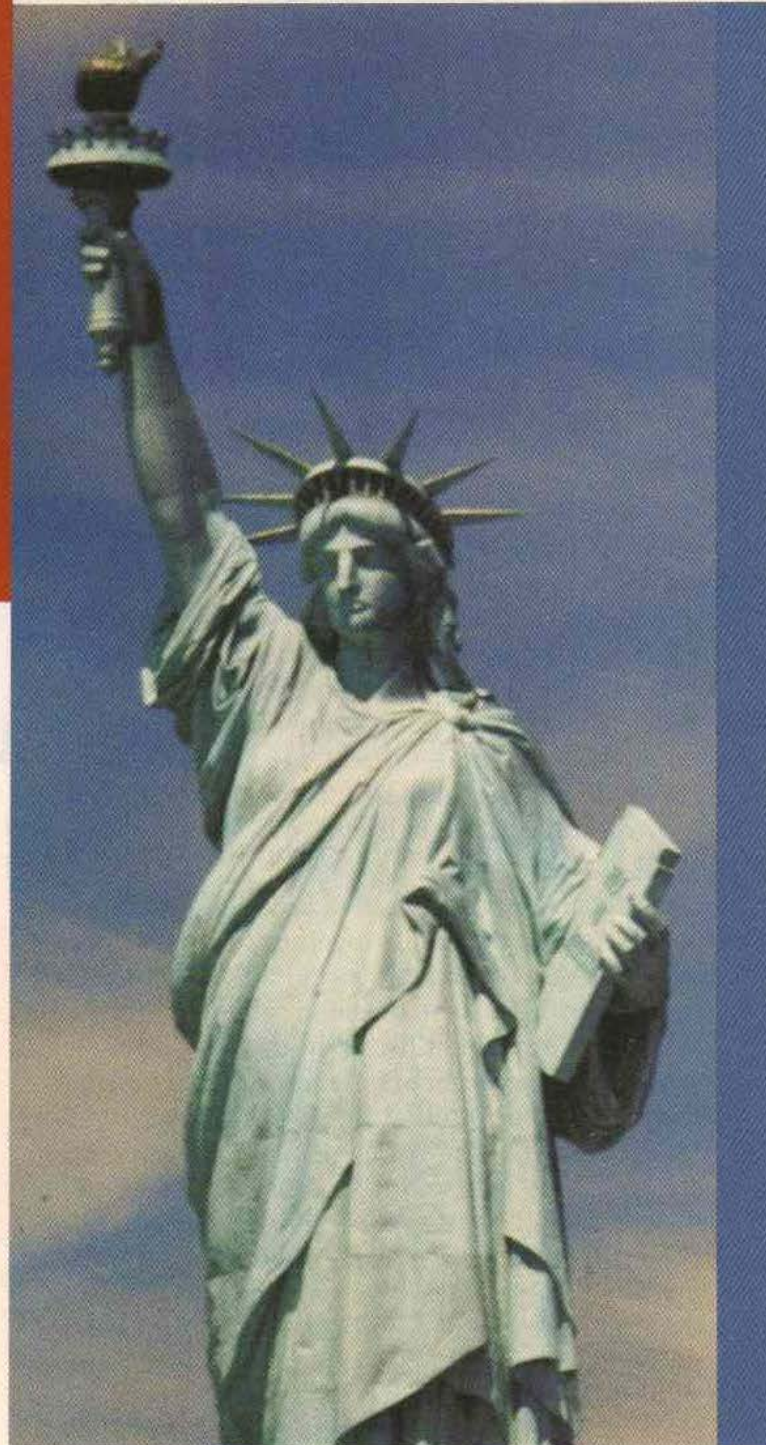
In Laurel, Montana, kids collected 143 pounds of pennies for a total of \$225. In Nowata, Oklahoma, young people raised \$163.40 by going through pockets of clothes and checking under cushions of sofas and chairs.

In other cities, kids are cooking up bake sales or throwing craft fairs. They are selling popcorn, ➡



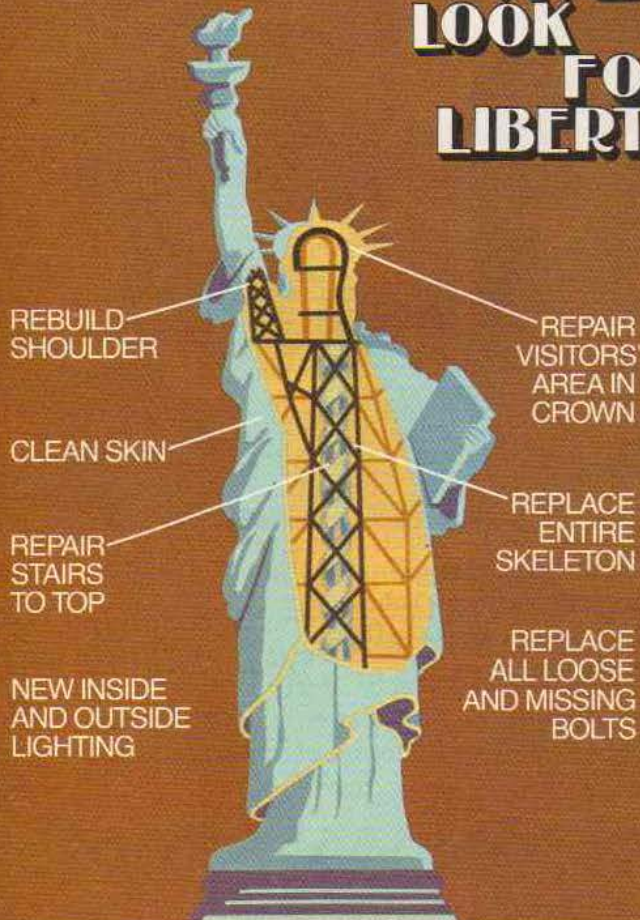


Left: Acid rain and other forms of pollution have left the torch covered with spots and rust.

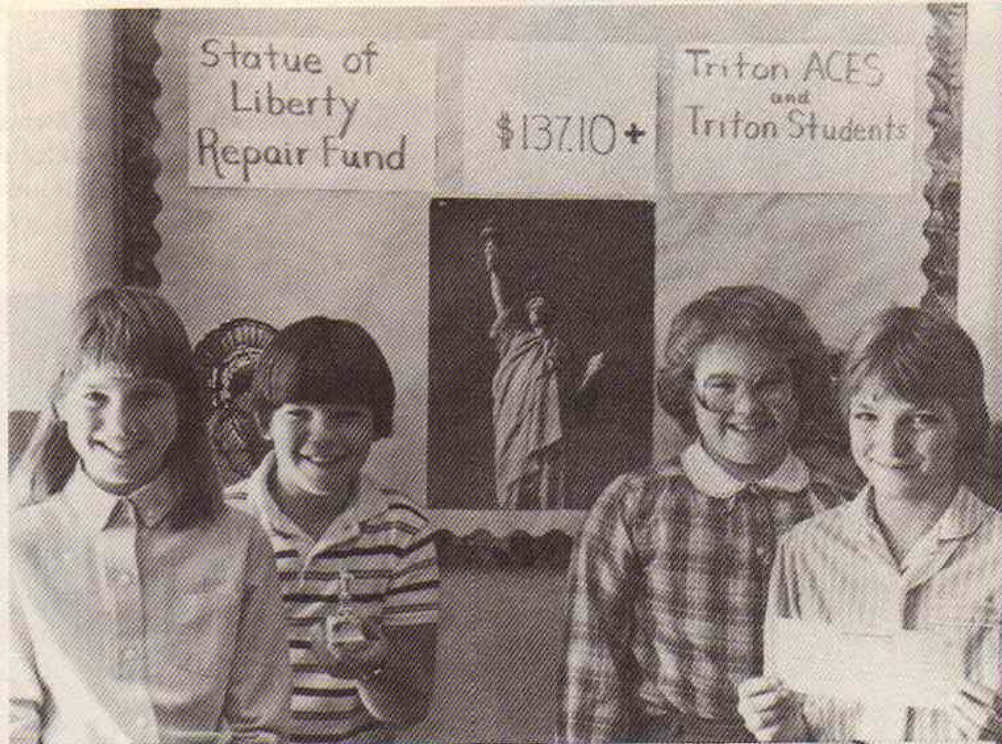


Above: The statue is one of the world's largest. It rises 151 feet, one inch (46.05 m) from the sandals to the top of the torch.

A NEW LOOK FOR LIBERTY



Triton Elementary School students in Warsaw, Indiana, raised \$137.10 to help repair Miss Liberty.



washing cars, scrubbing dogs, and mowing lawns. In Lansing, Michigan, some kids held a sing-along on the steps of the state capitol. People donated money for some tunes.

Some young people are signing contracts with their parents. "I'm doing extra math problems in exchange for a gift to the statue," says Monica Freed of Los Angeles, California. "Math isn't my favorite subject. But at least I'm helping to save an important piece of history."

And Paul Burns of Boston, Massachusetts, has gotten a group of friends together to jog for dollars. "It's great exercise," says Paul. "Besides, we're running to keep a symbol alive."

So far, Monica, Paul, and thousands and thousands of other young people have raised more than \$500,000. And that figure is climbing.

All the help these young people are giving the statue will be seen on July 4, 1986. On that day the statue will be 100 years old. Repairs will be finished. Bands will play. Fireworks will light up the sky. One of the biggest birthday parties the U.S. has ever seen will take place. And kids will have helped to make it happen.

(For more information on the Statue of Liberty, and suggestions for how you and your friends can help raise money to repair it, see page 36.)



These Northampton, Massachusetts, students from the Dunphy School gave up their small change to fix up the Statue of Liberty.

The Bloodhound Gang™



The Case of the Stolen Microchips

by Michael J. Dayton

Vikki and Ricardo thumbed idly through computer magazines as the Bloodhound Gang waited to see Carlton Clifford, the president of Gamma Video Games. Skip, however, was in no mood for reading. At the moment he could hardly breathe. A wool suit in the hot California weather did not suit him one bit.

A secretary approached. "I've told Carl you're here. He'll see you now."

She showed the Gang into Mr. Clifford's office, a room cluttered with computer equipment. Mr. Clifford, dressed in a Hawaiian shirt and blue jeans, was sitting in front of a computer screen. He seemed lost in thought and did

not notice that they had entered the room.

Skip stared at the screen for a moment, and his eyes lit up. "Why, that's 'Star Scorcher,' my favorite video game," he said.

Mr. Clifford looked up, smiled, and flicked off the computer. He introduced himself to each of the Gang. "Welcome to California and Silicon Valley, home and capital of the computer industry. Mr. Bloodhound told me you were visiting California for the Olympics. I'm delighted you found time to visit my company."

Vikki pointed at Skip. "Are you kidding? Skip wouldn't have missed this for the world."

"You see, Mr. Clifford," added Ricardo, ➤

"Skip thinks your game 'Star Scorcher' should be an Olympic event. Then he'd have a chance at a gold medal."

"Well, Ace, we'll have to play a game later," Mr. Clifford said. "And please call me Carl." For the first time, Carl noticed their clothes and laughed. "Skip, why don't you loosen that tie and relax?"

Skip immediately took off his tie and exhaled. "Air!" he said. "I can breathe again."

Carl lowered his voice. "Mr. Bloodhound tells me you three are pretty good detectives. Well, I need your help—I've got a real problem."

The Chips Are Down

He picked up a tiny object smaller than a fingertip and handed it to Ricardo. "Do you know what a microchip is?"

As Ricardo examined the object closely, Skip spoke up. "Microchips are the tiny computers inside a computer or video game. They're made of silicon and hold thousands of circuits. The chips are used to store information. In a video game, chips might control the joystick or the images on screen." Skip stopped and blushed slightly. "Or something like that..."

"Bravo, Skip," Carl said. "The information that can be stored on a chip smaller than the tip of your finger used to take rooms and rooms of machines. While working on our newest video game, one of my engineers, Judy Canfield, made an amazing discovery. She figured out a way to make a microchip even smaller. We made a few hundred based on that design. They work so well that they could make this company a fortune."

"That sounds great," Vikki said. "So what's your problem?"

Carl glanced down. "Someone who works here stole every last one of them."

"When did you miss them?" Ricardo asked.

"Just this morning. They were all accounted for yesterday. I noticed the microchips were gone after the engineers left," Carl said.

Vikki looked at her watch. "It's only ten minutes after two. Does your staff always leave this early in the afternoon?"

"No, today is special," Carl replied. "I let them all have the afternoon off. They wanted to watch Judy practice with her bow and arrows. I

think they made a little party of it."

"Bow and arrows?" exclaimed Skip. "What is one of your engineers doing with them?"

"Judy is an expert archer," Carl replied.

"She's so good that she made the Olympic archery team."

Vikki turned to Clifford. "Carl, did you notice anything unusual in the lab today?"

Carl fell silent for a moment. "Why, yes, now that you mention it. Judy brought her bow and arrows into work to show everyone. John Perkins, another engineer, got very excited about that. He examined the arrows very carefully, and wanted to know all about archery. That surprised me."

"Why is that?" asked Vikki.

"Ever since Judy developed that new microchip, John has been acting jealous of Judy. In fact, he came up to me at one point and told me that Judy had stolen some of his ideas for that new chip. But today he and Judy acted perfectly chummy."

"What else did you notice?" Ricardo asked.

Gumming Up The Works

"I noticed two empty chewing gum wrappers on one table. That struck me as odd. The engineers know that I don't allow any food in the lab."

Vikki was thoughtful. Then she smiled. "Carl, could you drive us over to the practice field? I'd like to meet a couple of your engineers."

When the Gang arrived, they found the party in full swing.

The day was windless and the heat nearly unbearable. About a dozen people sat under shade umbrellas to avoid the sun's piercing rays. A few brave souls sat on the grass sipping lemonade.

"Come on," said Carl. "I'll introduce you to our company champion."

They walked over to the target field. A few workers listened to Judy as she talked about her sport. John Perkins stood nearby chewing nervously on a piece of gum.

Judy smiled and waved as they neared. A glint of sunlight flashed off the braces on her teeth.

Judy continued with her explanation. "Bows are one of the oldest weapons. In fact, nearly

4,000 years ago, tribes in Asia and Europe were making bows from wood and animal horns. We haven't been able to improve much on their design, although different materials are used today. Besides wood, bows are made with fiberglass. And many of the arrows are now made of hollow aluminum tubing."

"There are different kinds of arrowheads, aren't there?" Ricardo asked.

Canfield smiled at him, and the light again reflected off her braces. "Yes, for example, a razorhead arrow is used for sport hunting. The tips can be changed by screwing them off the shaft—the body of the arrow.

Now, if you give me some room, I'll show you what I'll be doing at the Olympics."

Judy aimed from 55 yards and shot. The crowd clapped each time she hit the bull's-eye. Judy shot four rounds, shooting six arrows each time. As she was shooting one of her final arrows, something unusual happened. The arrow fluttered and went off course through its flight, missing the target and hitting a small tree.

The crowd gasped. Judy was stunned. "I've never seen an arrow act like that before."

"Maybe the wind caught it," offered Perkins.

Judy then drew her last arrow and shot. It behaved strangely as well. It swerved toward the ground, falling short of its target.

Again Judy looked puzzled.

Vikki Gets The Point

But a look of decision crossed Vikki's face. She raced across the field and picked up the two wayward arrows.

When Vikki returned, she handed the arrows to Carl. "If my hunch is right, you'll find a piece of chewing gum—and the missing microchips—inside these hollow shafts," she said.

Carl unscrewed one arrowhead and looked inside. The gum—and the microchips—were both there. Judy Canfield said nothing. John Perkins, however, was quick with a reply.

He pointed a finger at Judy. "First you try to steal the credit I deserved for the microchips. Now you're stealing the chips themselves! What were you planning to do—pass them off to some spy at the Olympics?"

In anger Vikki grabbed Mr. Perkins's arm. "She didn't put those microchips in there,

Mr. Perkins."

Perkins looked at her in disbelief. "Oh? And who do you think did it?"

"If Judy had placed the gum and microchips inside those shafts, she never would have shot them. She's an archery expert. She also knows that putting anything inside would upset that balance—and affect the arrow's flight."

Now Ricardo understood. "Of course!" he said. "The wind didn't affect those arrows. In fact, there's not even the slightest breeze today."

"There's another good reason to believe that Judy didn't do this," Skip said. "People who wear braces don't chew gum. So Judy probably wouldn't be carrying any. In fact, the only person here who is chewing gum is...."

All eyes focused on John Perkins. He turned pale, and chewed even faster.

"All right, I did it," he admitted. "But only because Judy got all the credit for my invention."

"You're the only thief around here, Perkins," snapped Carl. "And—you're fired!"

He turned to the Bloodhound Gang. "It looks like you three have done it again."

"Well," Skip said, "You can always count on us when the chips are down!"

"Oh, brother," groaned Vikki.

**Next month begins
a brand new adventure,
starring the
Bloodhound Gang.**



List of the Month

Olympic Briefs

by Gail Jarrow

New sports records may soon be set at the summer Olympics. Will the athletes and their records be as incredible as in past Olympics? Wait and see!



All in the Family Winning Olympic medals can run—er in this case, swim—in the family. Dezso Gyarmati, from Hungary, won medals for water polo at five games (1948 through 1964.) His wife, Eva Szekely, earned a gold medal in the breaststroke in 1952. And daughter Andrea made a splash in 1972. She won a silver in the backstroke and a bronze in the butterfly.



Getting in the Swim The Olympics have come a long way from when the first modern ones began in 1896. Back then, athletes played croquet and tug of war. This year, one of the new sports is synchronized swimming. That's like a gymnastics exercise for two or more people—except that it is done entirely in the water.



Way to Go, Babe In the 1932 Olympics, a woman contestant became one of history's top athletes. Her name: Babe Didrikson.

Didrikson set world records in the hurdles and javelin throw, then won a silver medal in the high jump. She also was a champion golfer, boxer, and swimmer. To top it off, Didrikson set the women's record for the longest baseball throw—296 feet!



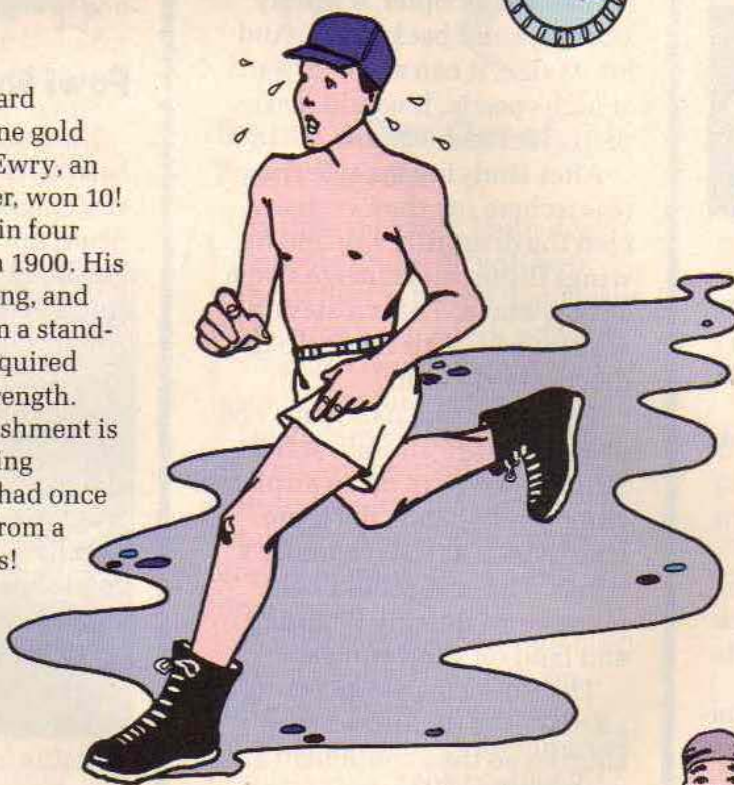
First Things First The first Olympics took place in Greece almost 2,800 years ago. The games honored Zeus, king of the Greek gods. Back then, only men could take part, and only men could watch. The first game had only one event—a footrace of about 600 feet (180 m). Later games included horse racing, chariot racing, boxing, and javelin throwing.



Are Their Faces Red!

Oops! Everyone makes mistakes—and sometimes they're Olympic-sized ones. In 1924, Anders Haugen, a ski jumper for the U.S. team, thought he had placed fourth. Fifty years later someone discovered Haugen had actually finished third! So at age 86, he became the oldest athlete ever to receive an Olympic medal. Better late than never!

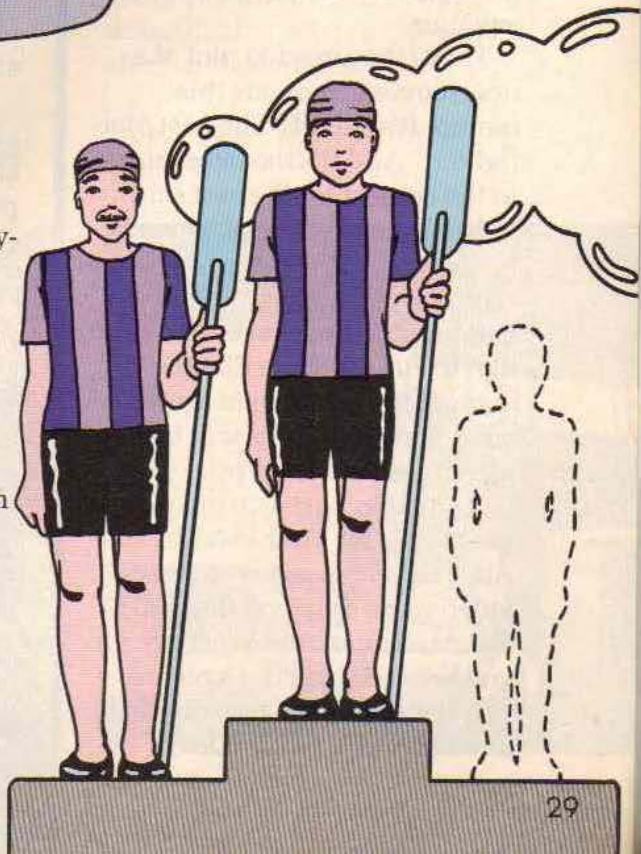
He's a Ten It's hard enough to win one gold medal. But Ray Ewry, an American jumper, won 10! Ewry competed in four games starting in 1900. His events—high, long, and triple jumps from a standing position—required incredible leg strength. Ewry's accomplishment is even more amazing because his legs had once been paralyzed from a childhood illness!



Male Run It must have been strange to see a mail carrier—in uniform—running in the 1904 Olympic marathon. Felix Carvajal, from Cuba, ran the marathon in his uniform, complete with bulky boots. The day was so hot that Carvajal had to remove most of his clothes along the way. He finished fourth, wearing only his underwear. How's that for a speedy delivery?



The Lost Winner Mystery-lovers are still trying to solve this Olympic whodunit. During the rowing finals in 1900, the Dutch needed a person to call directions to the rowers. At the last minute they asked a boy, no older than 10, to fill in. The Dutch won, but the boy disappeared. Now no one knows his name or if he ever received his gold medal!



Coming Attractions



An All Star Movie

What happens if you make a record-breaking score on a video game? If your name happens to be Alex, a group of aliens whisks you to another galaxy far, far away. There you become an incredible fighting force. Your mission: Destroy the aliens' enemies.

That's the amazing plot of a new movie that opens this month. It's called "The Last Starfighter." And it's the latest entry in the contest for the best sci-fi, video game movie of the year.

The space battles and special effects were made by a huge computer. Computer experts and movie makers agree that the computer-made scenes are so good that computers will be used more in making movies.

If you don't get a chance to see the movie, try your local arcade. Atari has come out with a new video game based on the film. But Atari guarantees that even if you break Starfighter's record, you'll still remain here on earth. Even if your name is Alex!

Dragonflies Give Clues to Better Airplanes

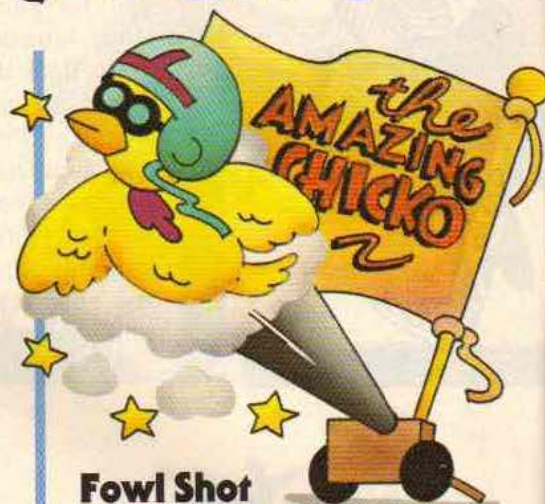
Engineers are taking a close look at one of nature's oldest flyers: the dragonfly. By studying the insect, engineers hope to build better airplanes.

The amazing dragonfly can hover (stay in one place) in the air like a helicopter. It can fly sideways and backwards. And for its size, it can scoot forward at high speeds. It would make a pretty incredible plane.

After studying the insects, researchers say they've discovered the dragonfly's secret: Its wings flutter and change shape as they move. This creates tiny whirlwinds of air that help the dragonfly zip along.

This idea from nature may be used on future aircraft. A fluttering metal strip on an airplane wing would create the same whirlwinds as the dragonfly's wings. The wing could help planes turn quickly in midair and land on short runways.

The fluttering wings could also be used on future space shuttles so they could land at airports with small runways.



Fowl Shot

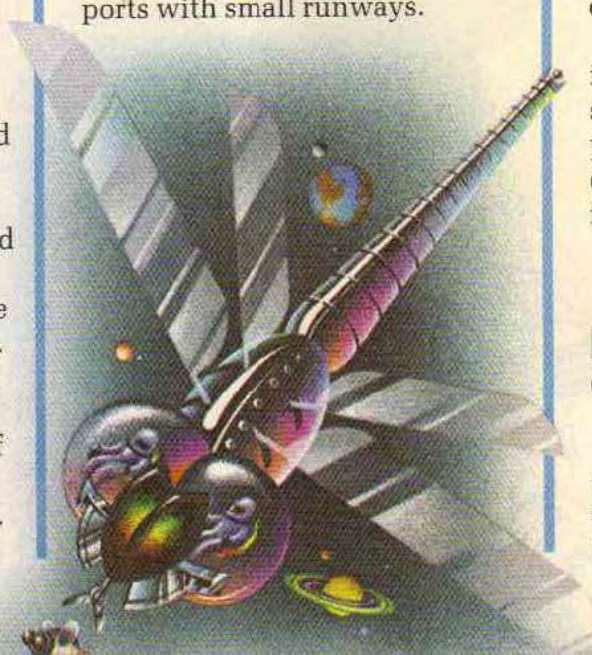
Researchers at an Air Force base in Tennessee are using frozen chickens to test the strength of aircraft windshields. Officers are loading four-pound chickens into a 20-foot-long cannon. The cannon shoots the fowl at a speed of 700 miles per hour. Its target: the windshield of an aircraft. If the chicken doesn't break the windshield, the glass may be used in new models of airplanes.

What's the reason behind the fowl shoots? In the past 17 years, birds have caused \$100 million worth of damage to Air Force planes. Sometimes birds have crashed through windshields causing low-flying planes to crash.

"The chickens have helped to improve the design of our windshields. That will save lives and planes," says one Air Force official. And that's good news for all future flyers.

Far Out Future Comes Closer

Living in space isn't such a far out idea any more. If all goes according to plan, a permanent space station will be circling the



earth by the early 1990s.

Six men and women will live on board for several months at a time. The astronauts will perform science experiments, manufacture items in space's gravity-free environment, and help repair satellites. The workers may even launch spacecraft from the station.

The orbiting building will contain living and working areas for the crew. Solar panels will turn sunlight into electricity. And to keep the astronauts from getting lonely, visitors from earth can fly up in the space shuttle.



Good Morning!

Are you tired of waking up to the sounds of Boy George on your alarm clock radio? Do you have trouble getting out of bed in the morning? Then a new invention may be just for you. It's called Scent Awake. This handy-dandy alarm clock wakes sleepers by spraying them with a pleasant smelling perfume. It's a new version of a cold shower to get you up and out in the morning!



Taking a Bite Out of Tooth Decay

By the year 2000, tooth decay for people under 50 will be a thing of the past. And that means that young people will probably not have to worry about losing teeth to natural causes.

Dentists say there are several reasons for the good news. Fluoride, a chemical that is added to drinking water in many cities, is already helping to cut down on tooth decay.

Dentists are also testing a clear coating—called a sealant—on children's teeth. The sealant is brushed on to the chewing areas. Dentists expect the coating to protect the tooth from germs.

Dentists have discovered the gene that makes tooth enamel. (That's the hard coating your teeth are covered with.) Dentists are starting to fill cavities with a paste that hardens into tooth enamel. This will last longer than metal fillings.

Already the results are paying off. According to one U.S. study, more than one-third of Americans under 17 have no tooth decay at all. So far, this has helped save more than \$2 billion a year in dentists' bills.

Software Star

Marney Kliever, 12, is a girl with a big future in the video game business. Marney, who lives in Dallas, Texas, wrote an adventure-style computer game called "Ebony Castle." "It took a month, working every free second that I had," says Marney.

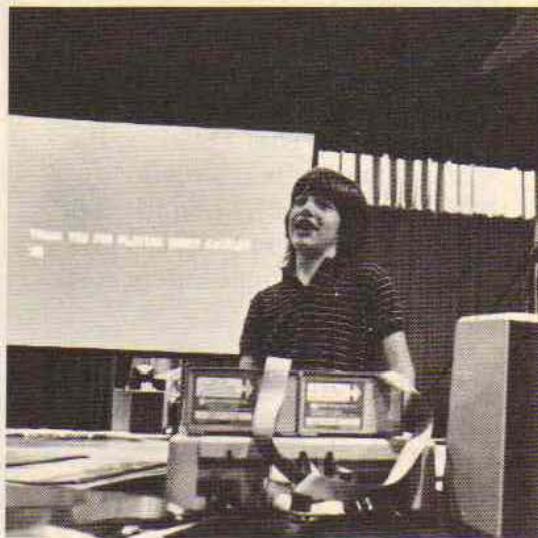
But her work paid off. Marney sold her game to a software company. Now lots of video game lovers can puzzle over it. Besides that, Marney has been giving talks to computer-users on how to play her game—and win.

"Ebony Castle" is all about a case of mistaken identity, and a stranger who must remove an ancient curse that is hanging over a town.

Graphics of lightning and clouds light up the screen. So do pictures of each of the castle's rooms.

When Marney isn't making up computer games, she's busy doing her homework on—what else?—her computer.

Story suggested by Keith Miller, Ennis, IN.



Coming Attractions

The More the Merrier

The future looks brighter for the California condor thanks to the recent birth of some chicks. The four new chicks were hatched at the San Diego (California) Zoo. Their eggs were taken in the wild and brought to the zoo by officials who are trying to save the endangered condor.

When the eggs disappeared, two sets of condor parents laid a second set of eggs. So more chicks are expected. And that's good news for the survival of this graceful bird.

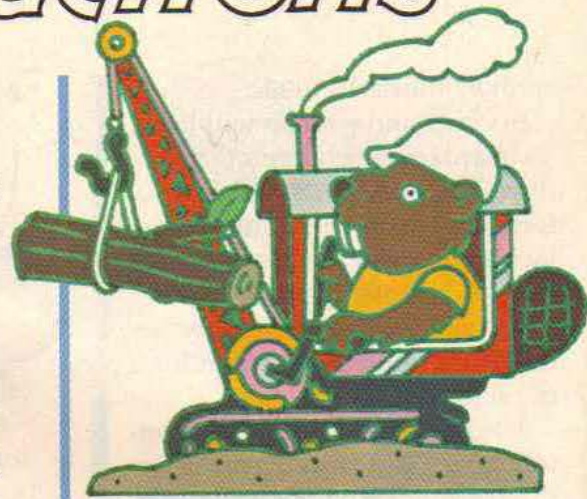


Sir Plus runs along a track made of aluminum tape. Its ultrasonic eyes check the path for people and for unidentified objects. As Sir Plus moves, the chatty robot talks to visitors about the museum's displays. (Its voice is a tape recording.)

As with all inventions, the designer had to keep changing Sir Plus to fit the job. For instance, kids liked to kick and jump on the tin man's bumper. So it was removed. Other little kids used Sir Plus as a jungle gym. The builder had to refit the wheels so Sir Plus wouldn't lose its balance.

Now the biggest problem about Sir Plus is that it's too popular. Instead of paying attention to the displays, visitors just stare in wonder at this big hunk of metal.

But at least Sir Plus has gotten people to visit the museum. So other museums are building robot guides. Sir Plus seems to be starting a whole new generation of robot guides.



Leave It to Beaver

Beavers may become the small dam builders of America. And in the process, they will be saving the U.S. pots of money.

Swiftly flowing creeks had been washing away the soil along some river banks in Wyoming and Utah. U.S. government engineers knew that small dams would help stop the swift currents. But dams could cost \$100,000 each.

So the engineers decided to leave logs and branches along the creeks. Beavers would do the work for the engineers.

The idea worked. Now the beavers' dams have slowed down the waters for about \$3,000 in lumber. That's a saving of \$97,000 over the people-made thing.

Tin Man Guides Visitors

At the Palm Beach (Florida) Science Museum, visitors are more amazed at the guide than at the exhibits. That's because the museum's guide is a robot.

The chunky 200-pound robot goes by the name Sir Plus because it was made out of surplus (extra) parts. Sir Plus's 4½-foot-tall body is actually a 55-gallon drum dressed up with lights. The robot runs on a car battery and rolls along on three wheels. Its head is a dome from a miniature submarine.

So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science stories that have to do with the future (which could even be next week!). Send stories to:

Coming Attractions
P.O. Box 599
Ridgefield, NJ 07657

computer magic

The Bloodhound Gang amazed everybody when they figured out who stole the microchips. Now here's your chance to wow everybody (maybe even yourself!) as you turn this computer program into a trick. It works like this:

- The directions are written like a computer program (a list of step-by-step instructions which tells a computer what to do).

- The trick won't work unless you do exactly what the program tells you.
- Start with the first step. Then go on to the next line. Don't skip any steps—unless the program tells you to.
- If you have to repeat a step, don't get upset. Remember, computers are logical. Going back to get ahead often makes sense.
- All set? Then GOTO line 10.

10 GET A GROUP OF FRIENDS TOGETHER.

20 SAY, "WHO WOULD LIKE ME TO GUESS WHAT NUMBER YOU'RE THINKING OF?"

30 IF NO ONE RAISES A HAND, GET A NEW GROUP OF FRIENDS, THEN GOTO 20.

40 SAY TO ONE FRIEND, "THINK OF A NUMBER FROM 1 TO 31. I WILL GUESS IT. DO YOU HAVE A NUMBER?"

50 IF ANSWER = NO, GOTO 40.

60 IF ANSWER = YES, SAY, "REMEMBER YOUR NUMBER. TELL IT TO NO ONE!"

70 POINT TO DATA BANK A.

80 ASK, "IS YOUR NUMBER IN THIS DATA BANK?"

90 IF ANSWER = YES LOOK AT THE FIRST NUMBER IN THAT DATA BANK. WRITE THAT NUMBER

DOWN IN THE COMPUTER MEMORY.

100 IF ANSWER = NO, THEN WRITE THE NUMBER ZERO IN THE MEMORY.

110 POINT TO THE NEXT DATA BANK. YOU MUST DO ALL THE DATA BANKS.

120 WHEN YOU'VE FINISHED, ADD ALL OF THE NUMBERS IN MEMORY.

130 SAY, "YOUR NUMBER IS (SAY TOTAL NUMBER IN MEMORY). AM I CORRECT?"

140 IF ANSWER = NO, THEN SAY, "WE'D BETTER LOOK AT THE DATA BANKS AGAIN." GOTO 70.

150 IF ANSWER = YES, ASK IF YOUR FRIENDS WANT TO PLAY AGAIN.

160 IF YES, ERASE NUMBERS IN MEMORY. GOTO 20.

170 IF NO, STOP.

DATA BANK

A	B	C	D	E
1	2	4	8	16
3	3	5	9	17
5	6	6	10	18
7	7	7	11	19
9	10	12	12	20
11	11	13	13	21
13	14	14	14	22
15	15	15	15	23
17	18	20	24	24
19	19	21	25	25
21	22	22	26	26
23	23	23	27	27
25	26	28	28	28
27	27	29	29	29
29	30	30	30	30
31	31	31	31	31

COMPUTER MEMORY

Data Bank A _____

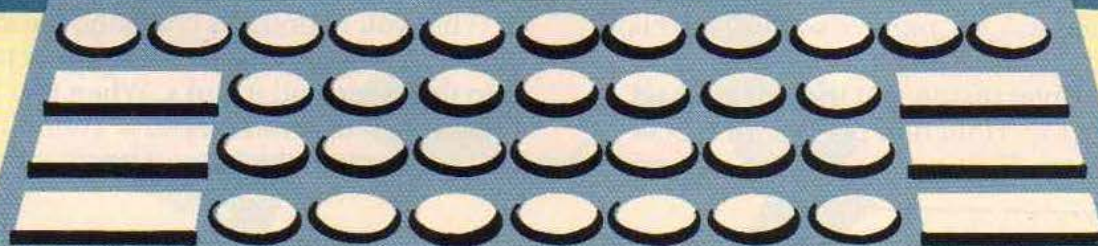
Data Bank B _____

Data Bank C _____

Data Bank D _____

Data Bank E _____

Total _____



Extra!

Don't close your magazine just yet. There are more games, puzzles, and surprises in this month's vacation EXTRA! And if you're going on a vacation, don't forget to take CONTACT along with you.

Diver in a Jar

You may not be going diving like the Doubilets this summer. But you can make a toy diver that will perform for you with the touch of a finger.

What You Need

- a large glass jar (with an opening large enough for your hand to fit through)
- a large balloon
- a large rubber band
- a small test tube or small glass container
- a piece of clay or Play Doh
- scissors
- water

What You Do

1. To make the diver, press a piece of clay around the sides of the open end of the small test tube (diagram 1). Make sure it is even so the diver will stand straight. *Don't plug up the container's open end.*

2. Cut about one inch off the open end of the balloon.

3. Stretch the balloon over the jar mouth to see if it fits. Take the balloon off and set it aside.

4. Fill the jar with water to one inch from the top.

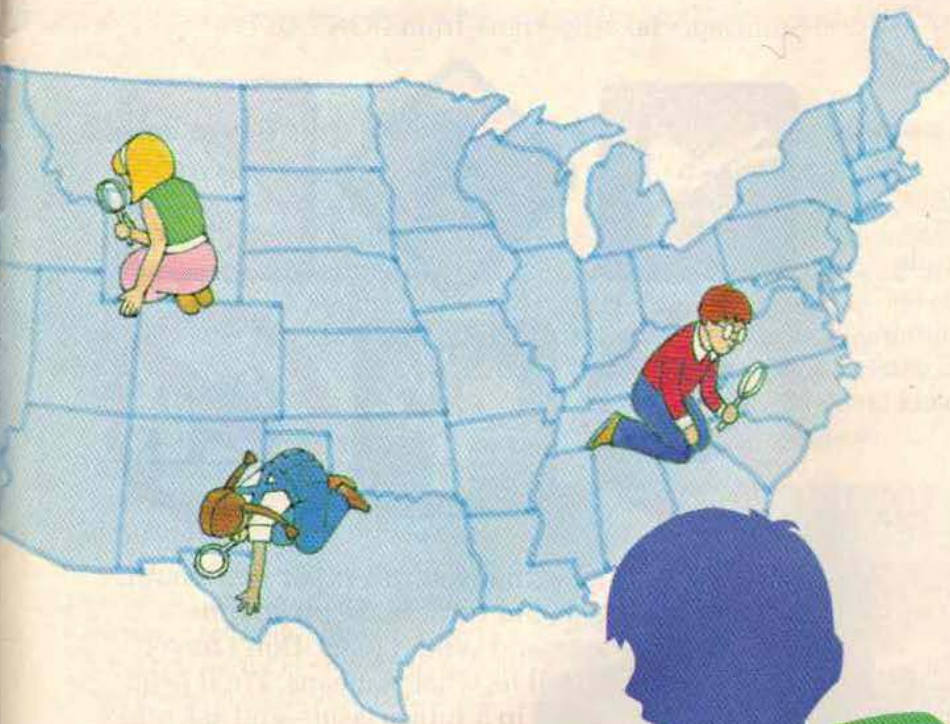
5. Drop the model diver straight down into the jar with the open end down. It will sink, then rise until it bobs above the water's surface. If it doesn't come back up, remove some of the clay around the bottom.

6. With the diver inside, put the balloon back over the jar's top. Hold it in place with rubber bands (diagram 2).

7. Press your fingers on the balloon's stretched surface. The diver sinks. Let go. The diver rises.

What you're doing is changing the air pressure on the water inside. More water is forced into the diver, and it sinks. When you let go, pressure on the water lessens. Water flows out of the diver into the jar, and the diver rises.





Mystery State

It's time to get out the old atlas again, and turn to a map of the United States. We've got one of the states in mind—but we won't tell you which one. We will give you some clues to help you figure out the mystery though. When you think you know the mystery state's identity, check out the answer on page 39.

- An ocean touches one of the borders of this state.
- The Mississippi River is between this state and California.
- This state is west of Connecticut.
- This state does not touch a Great Lake.
- This state is north of Virginia.
- This state's name is two words.

Vacation Scramble

Below are eight mixed-up words about vacations. Unscramble them and write them in the spaces below. When you're through,

answer the following riddle by circling the first letter in every other unscrambled word. The letters will spell the answer.

ARC	_____
NTNOMUAI	_____
TOROSUOD	_____
ABCHE	_____
ADOR	_____
AMP	_____
TUANRE	_____
LPRIAEAN	_____

Riddle

This vegetable's outside is thrown away so the inside can be cooked. But the outside of the inside is eaten—and the inside of the inside is thrown away.

Extra!

Some special silly signs from CONTACT:

What's Your Sign?

If you take a trip this summer, one thing you'll notice is lots of signs. You'll find them everywhere. Some just have symbols so that people can understand them no matter what language they speak. For instance, ☎ means telephone. We've posted some signs below. See if you can figure out what they say. Check your answers on page 39.

Real signs you might see as you travel:

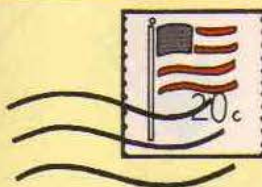


Now that you're a super sign sleuth, it's your turn. Make up your own sign and send it to us. Don't forget to tell us what it means. We'll print some in a future issue—and ask other CONTACT readers to guess what they are. If we use yours, you will get a nifty T-shirt. Send your signs to: **3-2-1 CONTACT:**

What's Your Sign?
P.O. Box 599
Ridgefield, NJ 07657

Lend a Hand

You read about some kids that are helping to save the Statue of Liberty. Now you can help, too. For information and tips on how you can get involved, write to: **Statue of Liberty/ Ellis Island Foundation**
Box 1986
New York, NY 10018
Make sure you include a self-addressed, stamped envelope.



*Statue of Liberty/
Ellis Island
Foundation
Box 1986
New York, N.Y.
10018*



Letters

Share and Share Alike

Dear 3-2-1 CONTACT,

My little brother always wants to read 3-2-1 CONTACT. My brother is six. What should I do?

Melina Mahacek
El Toro, CA

Dear Melina,

Let your brother read it! Even though CONTACT is written for older kids, your brother can probably find lots of exciting stuff to do, read or just look at in the magazine. So after you've finished reading the issue, share it with him. You might even read to him or show him what you liked most.

Who knows? One day your brother may thank you for turning him into a world famous scientist!

Have Contact, Will Travel

Dear 3-2-1 CONTACT,

I would like to know if readers in other countries get 3-2-1 CONTACT or just here in America?

Suzanne Drake
Hazel Green, AL

Dear Suzanne,

We did some detective work to find the answer to this one. Most of you live in the United States or Canada. But we discovered that when many American kids move to other countries, they take CONTACT with them. There are lots of readers who live on military bases with their families. Many CONTACT readers also live with parents who work for other U.S. government agencies in countries all over the world.

So even though we're not sold in foreign countries, our loyal readers are taking us along for the ride. Where are they taking us? To places such as Germany, the Philippines, Guam, France and Switzerland.

Please End the Suspense!

Dear 3-2-1 CONTACT,

I like reading your magazine every month, but the Bloodhound Gang mystery should be all in one part. I don't like reading one part, then waiting a month for part two. Please do something about it.

Reginald L. Royal
Chicago, IL



Dear Reginald,

Your wish is our command! Many readers wrote to tell us they couldn't wait to find out the ending to each Bloodhound Gang mystery. So from now on, the entire story will appear in one issue. That way you won't have to wait a whole month to find out how the gang solved their latest crime.

Try, Try Again

Dear 3-2-1 CONTACT,

In your Dec./Jan. '84 issue I tried your experiment about turning invisible ink into stuff you can see. I tried lemon juice, lime juice, real and reconstituted. I used

lamplight, firelight, and flashlights. I followed your directions carefully, but I still couldn't see anything. Could you please tell me what I'm doing wrong, or give me a few more details.

Anne Betzner
Taylor, MI

Dear Anne,

We're sorry you had trouble with the EXTRA! experiment. We assure you it works—honest! We try out all of our experiments time and time again until we've got them down pat.

You've just gone through what many scientists go through. Trial and error. We're not sure what you're doing wrong. It may be that there isn't enough heat from the bulb. Or you might want to try thinner paper. All we can say is try, try again. It's all part of learning to be a scientist. And just think how good you'll feel once you've done it!

Thanks!

Dear 3-2-1 CONTACT,

Your magazine has helped me learn more about the world. Your information about animals is useful too, because I want to become a veterinarian. Keep up the fantastic work!

Christina Tanay
Edison, NJ

We Want Mail!

Dear Readers,

We really love hearing from you. The questions, ideas and complaints we get help us make CONTACT a better magazine. So why not drop us a line? We can't answer every single letter, but we do read them all. Send your mail to: **3-2-1 CONTACT Letters**

P.O. Box 599
Ridgefield, NJ 07657

ENTER ORDER FORM

- ☐ Yes! Please send 1 year (10 issues) of Enter for only \$12.95.

CHILD'S NAME _____ AGE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

LIST BILLING NAME AND ADDRESS IF DIFFERENT FROM ABOVE.

☐ PAYMENT ENCLOSED ☐ BILL ME LATER

MAIL TO: Enter Magazine
One Disk Drive, P.O. Box 2685, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$8.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HPA6

INFORM WITH ENTER

NEW—ENTER Magazine. The fun way for your child to learn computer skills, understand computer technology and even become a video game champ. Ten issues bring programs, quizzes, puzzles and features that involve 10-16 year olds and encourage them to become competent computerites. And you don't need a computer in your home to make it work!



SESAME STREET ORDER FORM

- ☐ Yes! Please send 1 year (10 issues) of Sesame Street for only \$9.95.
☐ I prefer 2 years (20 issues) for only \$18.95.

CHILD'S NAME _____ AGE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

LIST BILLING NAME AND ADDRESS IF DIFFERENT FROM ABOVE.

☐ PAYMENT ENCLOSED ☐ BILL ME LATER

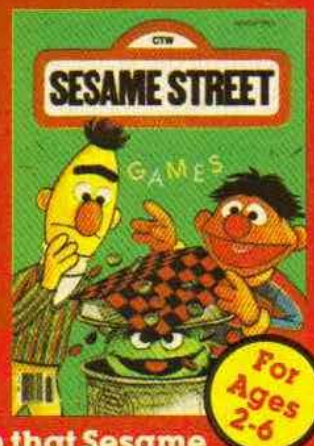
MAIL TO: Sesame Street Magazine
P.O. Box 2894, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$6.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HPB4

ENJOY WITH SESAME STREET

Sesame Street Magazine—Big Bird and his delightful friends will bring dozens of playful surprises, ten terrific times a year. (It's the entertaining education that Sesame Street does best!) Puzzles, cut-outs, games, A-B-C's, 1-2-3's...there's all the magic of the TV super-series in every colorful issue.



THE ELECTRIC COMPANY ORDER FORM

- ☐ Yes! Please send 1 year (10 issues) of Electric Company for only \$9.95.
☐ I prefer 2 years (20 issues) for only \$18.95.

CHILD'S NAME _____ AGE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

LIST BILLING NAME AND ADDRESS IF DIFFERENT FROM ABOVE.

☐ PAYMENT ENCLOSED ☐ BILL ME LATER

MAIL TO: The Electric Company Magazine
200 Watt Street, P.O. Box 2922, Boulder, CO 80322

Subscriptions to Canada and other countries, add \$6.00 per year. Please remit in U.S. currency. Allow 6-8 weeks for delivery.

8HPC2

ENTERTAIN WITH ELECTRIC COMPANY

The Electric Company Magazine—as creatively entertaining as the T.V. show kids love. It's amusing, playful, absorbing and educational for beginning and young readers. Enjoy ten colorful issues filled with puzzles, posters, cut-outs, Spidey super stories, jokes...and sunny smiles.



Mystery State (page 35)

NEW JERSEY

Vacation Scramble (page 35)

- | | |
|----------|----------|
| CAR | ROAD |
| MOUNTAIN | MAP |
| OUTDOORS | NATURE |
| BEACH | AIRPLANE |

What's Your Sign? (page 36)

Real Signs:



RESTAURANT



WARNING:
SHARP
OBJECT



LOST AND
FOUND



NO BIKE
RIDING



FIRST AID



NO SMOKING

CONTACT's Silly Signs:



STINKY
SMELL



PANDA
CROSSING



FRISBEE
ZONE



NO GUM
CHEWING



TREEHOUSE
AHEAD



NO FEEDING
THE DINOSAURS

Thank You! Thanks to Ron Guidry and to Monica Schneider for their help with the Special Olympics material. Thanks also to Henning Nielsen for his help with the Statue of Liberty story.

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Next Month!

Here's a sample of what you'll find in the next issue of 3-2-1 CONTACT:

Mind Games

CONTACT looks at ESP—real or just an illusion?

Super Cars

Find out what's in store for the cars you may be driving someday.

Australia's Weird Animals

Discover the strange creatures of this island continent.

Plus Factoids, The Bloodhound Gang, Any Questions?, and More!



Heads Up!

If you have trouble making up your mind, pity this rare Mississippi map turtle. The turtle's two heads make its life confusing.

"Each head has a brain so each head works separately," says John Behler, an expert in reptiles. "Sometimes the brain in one head tells the turtle to go in one direction. The brain in the other head may tell the turtle to go in the opposite direction. Then the two heads fight it out."

That's not the two-headed turtle's only problem. It might start munching on the same worm from opposite ends, only to meet in the middle. Who gets the last piece? Or one head can be asleep while the other is awake.

"Twinning—two heads on one body—happens once in 100,000 times," explains Mr. Behler. Who says two heads are better than one?

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